ENVIRONMENTAL COMPLIANCE AND PROTECTION MANUAL

CHAPTER 13

NOISE MANAGEMENT

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CHAPTER 13

NOISE MANAGEMENT

SECTION 1: INTRODUCTION

13100. <u>PURPOSE</u>. This chapter establishes Marine Corps policy and responsibilities for compliance with statutory requirements for reducing environmental noise at Marine Corps installations. Workplace noise as an occupational health and safety issue is not addressed in this Manual.

13101. APPLICABILITY

- 1. See paragraph 1101.
- This chapter also applies to overseas installations.

13102. BACKGROUND

- 1. The Noise Control Act seeks to protect Americans from "noise that jeopardizes their health or welfare." This Act directs Federal agencies to further this policy within their programs.
- 2. Marine Corps operations have the potential to cause adverse noise impacts on surrounding communities. State, local, and host nation laws may also prescribe maximum noise levels to control these impacts.
- 13103. <u>FEDERAL STATUTES</u>. The Noise Control Act of 1972 (42 U.S.C. 4901 et seq.) requires that Federal performance standards be incorporated into the design of certain new vehicles, railroad equipment, and products in order to reduce noise emissions. The Noise Control Act does not prescribe retrofit modifications for existing noise sources. Military aircraft, combat equipment, and weapon systems are exempt from new product design standards. The Act provides only for the prescription and amendment of standards for nonmilitary aircraft noise and sonic boom.

13104. REQUIREMENTS

- 1. Executive Order (EO) 12088, October 13, 1978. EO 12088 directs Federal facilities to comply with all requirements applicable to environmental noise management. Federal facilities must also comply with boundary noise limits established by state and local laws subject to specific exemption.
- 2. Air Installations Compatible Use Zone (AICUZ) Program. The AICUZ program was established by DoD, as described in appendix L. OPNAVINST 11010.36 and in 32 CFR 256. This program identifies and addresses incompatible developments in areas adjacent to air installations and subject to rated levels of aircraft noise and potential accident impacts.

3. State and Local Requirements

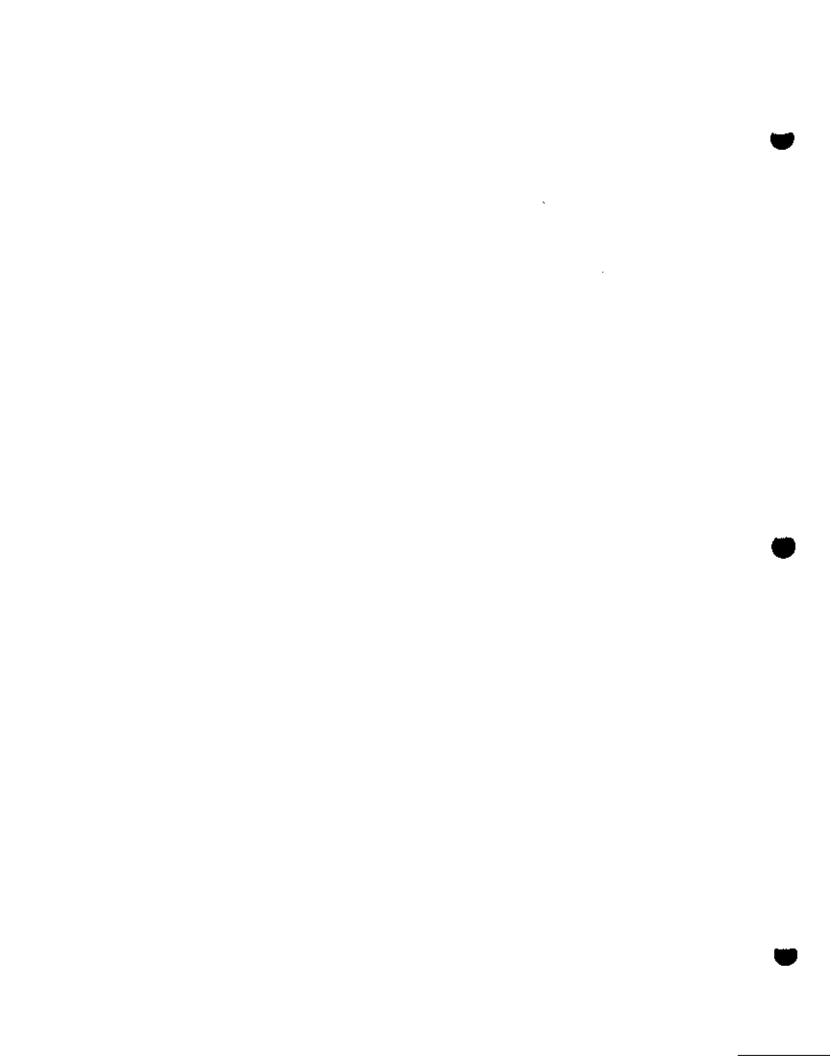
a. State and Local Laws

- (1) State and local regulations on environmental noise vary too widely for any generic use in determining compliance for a specific operation at a specific site. As a general rule, states tend to treat environmental noise as source-specific, the emissions from which will be controlled depending on the community area specifically affected. State and local laws may prescribe maximum noise levels across property lines. These boundary noise limits are attainable by a variety of structural and natural noise path barriers and by source design modifications.
- (2) The following Marine Corps installations and activities may be subject to state and local regulations and may require studies to determine the impact of environmental noise on the surrounding communities:
 - (a) Airfields.
 - (b) Weapon, rocket, missile-firing ranges.
 - (c) Test tracks for vehicles.
 - (d) Outdoor power-generating equipment.
 - (e) Demolition and explosive disposal sites.
- b. Even in the absence of state and/or local environmental noise regulations, the Marine Corps must be aware of adverse

- noise impacts in the surrounding community. The Marine Corps can minimize adverse public response to its programs by initiating a coordinated cooperative approach with the community and by emphasizing mutual problem solving with state and local governmental authorities and community organizations.
- c. A review of complaints from residents of surrounding communities can help to determine the degree and extent to which the surrounding community perceives the Marine Corps as responsible for an adverse environmental noise impact. The public Affairs Office and the community planning and liaison officer can be especially helpful in handling complaints and in advising the community of actions being taken to minimize environmental noise impacts.
- d. Compliance with state and local requirements is generally interpreted to mean that the Marine Corps will comply with the procedural as well as the substantive aspects of environmental noise legislation. Obtaining permits for regulated functions would be an example of procedural compliance.
- 4. Environmental Compliance. See chapter 4 of this Manual for information on policy, responsibility, and procedures for achieving compliance with applicable EO's, and Federal, state, interstate, and regional statutory and regulatory environmental requirements.

13105. TERMS AND DEFINITIONS

- 1. <u>AICUZ Program</u>. The AICUZ program recognizes that some air installation operations are incompatible with certain possible uses of the land in the vicinity of the installation. The AICUZ program seeks to restrict the use of such land to compatible uses through such means as local zoning, state legislation, acquisition of restrictive easements, and acquisition of fee titles by the Federal Government.
- 2. <u>Environmental Noise</u>. The intensity, duration, and character of sounds from all sources.
- 3. <u>Low-Noise Emission Product</u>. Any product that emits noise in amounts significantly below the levels specified in noise emission standards applicable to that type of product under the Noise Control Act at the time of procurement.



CHAPTER 13

NOISE MANAGEMENT

SECTION 2: MARINE CORPS POLICY

13200. GENERAL

- 1. Unless specifically exempted, Marine Corps commands engaged in any activity resulting in noise emissions must comply with Federal, state, interstate, and local requirements for the control and management of environmental noise.
- 2. The Marine Corps noise control and management programs must:
- a. Coordinate with other Federal agencies to maintain active programs to protect the health and welfare of both on-base and off-base personnel from hazardous noise levels.
- b. Procure, whenever feasible, low-noise emission products. Emphasize a "buy quiet" approach in procurement actions.
- c. Soundproof, wherever feasible, Marine Corps-owned or -operated school and child development center buildings significantly affected by noise from military operations.
- d. Locate noise-sensitive housing and other developments away from major noise sources.
- e. Cooperate with and support neighborhood self-help programs to identify and address local noise problems.
- f. Consider noise problems when planning, acquiring, and siting noise-generating equipment such as engine test stands. Give full attention to all available alleviating measures, such as remote siting and sound suppression equipment. Consider allocating aviation buffer zones to wildlife refuges or agricultural outleases to preclude encroachment of the civilian community.
- g. Notify the public to the extent feasible of any significant increases in noise generation or in deviations from normal noise generation patterns. Also, where the generation of significant noise routinely affects the civil community,

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institute a program of community education to develop positive public relations.

- h. Minimize disruption to the local community regarding operations that are known to generate complaints. These activities should still be consistent with military requirements and the efficiency of operations, but they should be conducted at such times, locations, and under such conditions as to minimize the disruption to the local community.
- 13201. WORKPLACE NOISE. Workplace noise is not considered an environmental noise. Guidance for occupational noise is provided in MCO 6260.1.

13202. AVIATION NOISE SUPPRESSION

- 1. Marine Corps installations must consider ameliorating options such as remote siting, sound suppression equipment, and sound barriers when developing new aircraft-related systems such as engine test stands.
- 2. Marine Corps installations must consider suitably quiet, ground support equipment (e.g., starters, hush houses) when procuring new aircraft systems.
- 13203. <u>RESTRICTING NOISY OPERATIONS</u>. As much as possible, personnel must limit to normal working hours the use of power tools, machinery, construction equipment, and other noisy devices.

CHAPTER 13

NOISE MANAGEMENT

SECTION 3: RESPONSIBILITIES

13300. <u>CMC (LF)</u>

- 1. Promote research to define and study noise pollution problems unique to the Marine Corps, and coordinate such research with other Marine Corps facilities and with the Environmental Protection Agency.
- 2. Ensure that ground equipment associated with procurements of new and/or follow up aircraft contain necessary noise suppressers.
- 3. Provide support to Marine Corps installations and Marine Corps commands/units and tenants by interpreting Federal, state, local, and overseas noise management requirements and by uniformly applying Marine Corps bolicy as set forth in the Manual.
- 4. Assist installations in resolving disputes with Federal, state, local, and foreign regulatory agencies as required.
- 5. Conduct special environmental compliance and protection studies with regard to noise management to assist in establishing policy or initiating actions.
- 6. Ensure, through field visits and the Environmental Compliance Evaluation Program, Marine Corps cooperation and compliance with Federal, state, and local regulatory agencies with regard to noise management.
- 7. Track Marine Corps progress toward meeting established noise management goals.
- 13301. <u>CG/CO OF MARINE CORPS INSTALLATIONS AND COMMANDER MARINE</u> FORCES RESERVE (COMMARFORRES)
- 1. Establish a base or station order implementing the specifications set forth in this chapter.

- 2. Initiate procurement procedures to ensure that products and equipment not designed for combat use meet Federal or host nation noise standards.
- 3. Implement procedures for limiting on-base noise generating operations and for complying with property-line noise levels consistent with applicable local laws or host nation standards.
- 4. Ensure that coordination occurs as appropriate with the safety office in matters relating to noise exposure.
- 5. Identify and submit to the CMC (LFL) and the CMC (LFF) project documentation and funding requests for noise pollution management that are required to maintain compliance with applicable existing and emerging regulations and permits. Program and budget for personnel, equipment, materials, training, and monitoring required to comply with environmental noise management requirements. Pay appropriate Federal, state, and local fees. Ensure that the Environmental Management Hierarchy is employed, pollution prevention alternatives evaluated, and life-cycle cost impacts assessed, in evaluating and selecting projects that address compliance requirements.

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CHAPTER 14

PESTICIDE POLLUTION PREVENTION

SECTION 1: INTRODUCTION

14100. <u>PURPOSE</u>. This chapter establishes Marine Corps policy and responsibilities for complying with the legal use of pesticides at Marine Corps installations in accordance with the DoD pest management specifications outlined in appendix I and the DON requirements described in OPNAVINST 6250.4.

14101. APPLICABILITY. See paragraph 1101.

14102. BACKGROUND

- 1. OPNAVINST 6250.4 was signed jointly by direction of the CMC and the Chief of Naval Operations and applies to all Navy and Marine Corps deployed personnel, ships, and stations including non-DON property under DON stewardship where pest control operations occur.
- The DoD pest management specifications described in appendix I prescribe detailed procedures for the DoD pest management program. Procedures prescribed under the instruction are based on IPM concepts. IPM is the method of choice for DoD pest management and disease vector control. IPM is a sustainable approach to managing pests and controlling disease vectors by combining applicable pest management tools in a way that minimizes economic, health, and environmental risks. IPM uses regular or scheduled monitoring to determine if and when treatments are needed and employs physical, mechanical, cultural, biological, genetic, regulatory chemical, and educational tactics to keep pest numbers low enough to prevent unacceptable damage or impacts. Treatments are not made according to a predetermined schedule; they are made only when and where monitoring has indicated that the pest will cause unacceptable economic, medical, or aesthetic damage. Treatments are chosen and timed to be most effective and least disruptive to the natural control of pests. Least hazardous but effective pesticides are used as a last resort.

3. <u>Relationship of Pesticide Pollution Prevention to other Environmental Program Areas</u>

- a. For Marine Corps policy on water quality management, see chapter 20 of this Manual.
- b. For Marine Corps policy on pollution prevention, see chapter 15 of this Manual.
- c. For Marine Corps policy on hazardous waste (HW) management, see chapter 9 of this Manual.
- d. For Marine Corps policy on emergency planning and response, see chapter 7 of this Manual.
- 4. Additionally, the Marine Corps must integrate environmental compliance for pesticides with occupational health and safety policies and regulations.

14103. FEDERAL STATUTES

- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) of 1972, as Amended (Public Law 92-516, 7 U.S.C. 136 et seg.). FIFRA provides the principal means for preventing adverse effects on the environment from pesticides through product registration and applicator certification. The Environmental Protection Agency's (EPA) registration of all pesticide products results in label instructions on each container for use, storage, and disposal. Label instructions are legally applicable to all users. Under FIFRA, the EPA must accept certain recalled pesticides for safe disposal. It is illegal to purchase, distribute, or use any pesticide that does not have an EPA registration number or for which registration has been canceled or suspended. It is also illegal to apply, store, or dispose of any pesticide or container in any manner inconsistent with applicable regulations. Although FIFRA does not delegate enforcement responsibilities for Federal facilities to the states, many states have established Memoranda of Understanding (MOU) with the DoD regarding the procurement and use of pesticides and the on-site inspection of Marine Corps installations.
- 2. <u>Resource Conservation and Recovery Act (RCRA) of 1976, as Amended (42 U.S.C. 6901, et seg.)</u>. RCRA outlines the HW Management requirements for the disposing of excess or waste pesticides and for equipment and containers contaminated by

pesticides. RCRA regulations identify the criteria, standards, and requirements for considering excess pesticides, pesticide containers, and the waste resulting from the cleanup of pesticide spills (see chapter 9 of this Manual).

- 3. Federal Water Pollution Control Act of 1972, as Amended by the Clean Water Act of 1977 (33 U.S.C. 1251 et seg. This Act provides for protecting surface waters from contamination by pesticides in wastewater and in land runoff. Control is exercised through stringent effluent limitations imposed through the National Pollutant Discharge Elimination System permitting program (see chapter 20 of this Manual).
- 4. Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986 (42 U.S.C. 1100, et seq.). EPCRA provides for protecting and notifying communities in the event of a release of a toxic chemical. The list of toxic chemicals requiring notification includes several pesticides. The Marine Corps must comply with specific provisions of EPCRA as required by Executive Order (EO) 12856, August 3, 1993 (see chapter 7 of this Manual).
- 5. Toxic Substances Control Act (TSCA) of 1976 (15 U.S.C. 2601 et seg.). This Act requires the EPA to regulate and control harmful chemical and toxic substances in commercial use. Congress enacted TSCA to reduce unreasonable risks from chemicals to human health and the environment. Section 6 of TSCA authorizes the EPA to regulate hazardous chemical substances and mixtures.
- 6. Endangered Species Act (ESA) of 1973 (16 U.S.C. 1531, et seg.). The ESA provides for protecting threatened and endangered species of fish, wildlife, and plants and their habitats. The Act requires Federal agencies to ensure that no agency action is likely to jeopardize the continued existence of endangered or threatened species. Under the ESA, the EPA is required to ensure that pesticide use is not likely to jeopardize endangered species or to adversely affect critical habitats. Endangered species and critical habitat protection is implemented through the pesticide labeling process and the issuance of state specific bulletins.
- 7. Migratory Bird Treaty Act of 1918, as Amended (16 U.S.C. 703, et seg.). This Act protects migratory birds and their nests and eggs from being hunted, captured, purchased, or traded. The United States Fish and Wildlife Service (USFWS) must issue a permit before a pesticide can be used to manage bird populations other than starlings, English house finches (house sparrows), and pigeons.

- 8. Federal Noxious Weed Act of 1974 (7 U.S.C 2801 et seq.). This Act prescribes integrated management systems to control or contain undesirable plants.
- 9. <u>National Environmental Policy Act (NEPA) of 1969 (42 U.S.C.</u>
 <u>4321 et seg.</u>). NEPA specifies requirements for the aerial application of pesticides, as well as the filing of environmental impact statements on pesticide decisions.

14104. REQUIREMENTS

- 1. <u>DoD Pest Management Program</u>. See appendix I for complete information on specific DoD requirements.
- a. Develop and maintain the annual review and revise their pest management plans in accordance with the program elements in appendix I and with the Armed Forces Pest Management Board (AFPMB) Technical Information Memorandum (TIM) 18, Installation Pest Management Guide (see Technical Information Memoranda definition paragraph 14105.23).
- b. Implement pest management programs approved by pest management consultants and performed by certified pesticide applicators in accordance with the pest management plan written for each installation.
- c. Establish pest management self-help programs for military housing when cost-effective and when IPM monitoring indicates a need for a self-help program.
- d. Have all pesticide applications to Marine Corps installations made only by properly trained and certified personnel in accordance with the DoD Plan for the Certification of Pesticide Applicators of Restricted Use Pesticides or by state-certified applicators.
- e. Use pesticides in accordance with applicable laws including FIFRA.
- f. Use only pesticides that have been approved by a DoD pest management consultant. Consideration should be given to locally purchased pesticides to ensure conformance with state management plans for groundwater protection and to facilitate use of recyclable pesticide containers when appropriate pesticides are not available in the Federal supply system. Pesticides may be procured locally if needed for an emergency, if required due to

unique local situations, or if required in quantities so small that the assignment of a National Stock Number (NSN) is not practical.

- g. Maintain complete daily pesticide application and pest management operations records as required by FIFRA and 7 U.S.C. 136i-1 or for pest management Measures of Merit (MOM), using DD Form 1532-1 or a computer-generated equivalent. Produce a monthly summary, using DD Form 1532 or computer-generated equivalent, to provide data for regulatory, DoD, Federal, state, or local agency data calls; for Marine Corps program review and oversight; and for MOM's. Installation commanders must ensure that these records are archived after 2 years for permanent retention.
- h. Use pest management contracts when more cost-effective than in-house services. Ensure that firms and their employees performing contract pest management work on Marine Corps installations and in support of Marine Corps operations overseas comply with all certification, licensing, and registration requirements of the state or country where the work is performed. Ensure that the technical portions of contracts involving pest management reflect IPM methodology and are reviewed and approved by a DoD pest management consultant before solicitation.
- i. Have quality assurance evaluators (QAE), who have been trained in pest management at DoD-sponsored courses, inspect pest management operations and pesticide applications performed by contractors.
- j. Report pest management operations and pesticide applications performed by contractors as required in paragraph 14104.g above.
- 2. Environmental Compliance. See chapter 4 of this Manual for information on policy, responsibility, and procedures for achieving compliance with applicable EO's, and Federal, state, interstate, and regional statutory and regulatory environmental requirements.

14105. TERMS AND DEFINITIONS

1. <u>Certifying Officials</u>. Professional DoD pest management personnel who are designated in writing by the Service Components to the Executive Director, AFPMB, as being certified and qualified to meet the DoD standards in the DoD Plan for the

Certification of Pesticide Applicators of Restricted Use Pesticides.

- 2. <u>Component Senior Pest Management Consultant</u>. The professional DoD pest management individuals who are designated in writing by the Service Components to the Executive Director, AFPMB, as being the primary points of contact for the Component's pest management program, including technical guidance, management oversight, and information requirements.
- 3. <u>Direct Supervision</u>. Supervision that includes being at the specific location where pest management work is conducted, providing instruction and control, and maintaining a line-of-sight view of the work performed. Certain circumstances may temporarily remove the line-of-sight view of the application of pesticide from the supervisor such as topographic constraints, vegetation constraints, or building structural constraints. Under these temporary circumstances, the supervisor must be responsible for the actions of the pesticide applicators. (see Uncertified Installation Pesticide Applicator, definition paragraph 14105.13e, below).
- 4. <u>Disease Vector</u>. Any animal capable of transmitting the causative agent of a human disease; serving as an intermediate or reservoir host of a pathogenic organism; or producing human discomfort or injury, including (but not limited to) mosquitoes, flies, ticks, mites, other insects, snails, and rodents. It is recognized that certain disease vectors are predominately economic pests that as conditions change may require management or control as a disease vector.
- 5. <u>Disinfection</u>. The procedure of killing or removing insects from ships or aircraft to prevent their importation into another port or country.
- 6. IPM. A planned program, incorporating continuous monitoring, education, recordkeeping, and communication to prevent pests and disease vectors from causing unacceptable damage to operations, people, property, materiel, or the environment. IPM uses targeted, sustainable (effective, economical, environmentally sound) methods, including education, habitat modification, biological control, genetic control, cultural control, mechanical control, physical control, regulatory control, and where necessary the judicious use of least-hazardous pesticides.

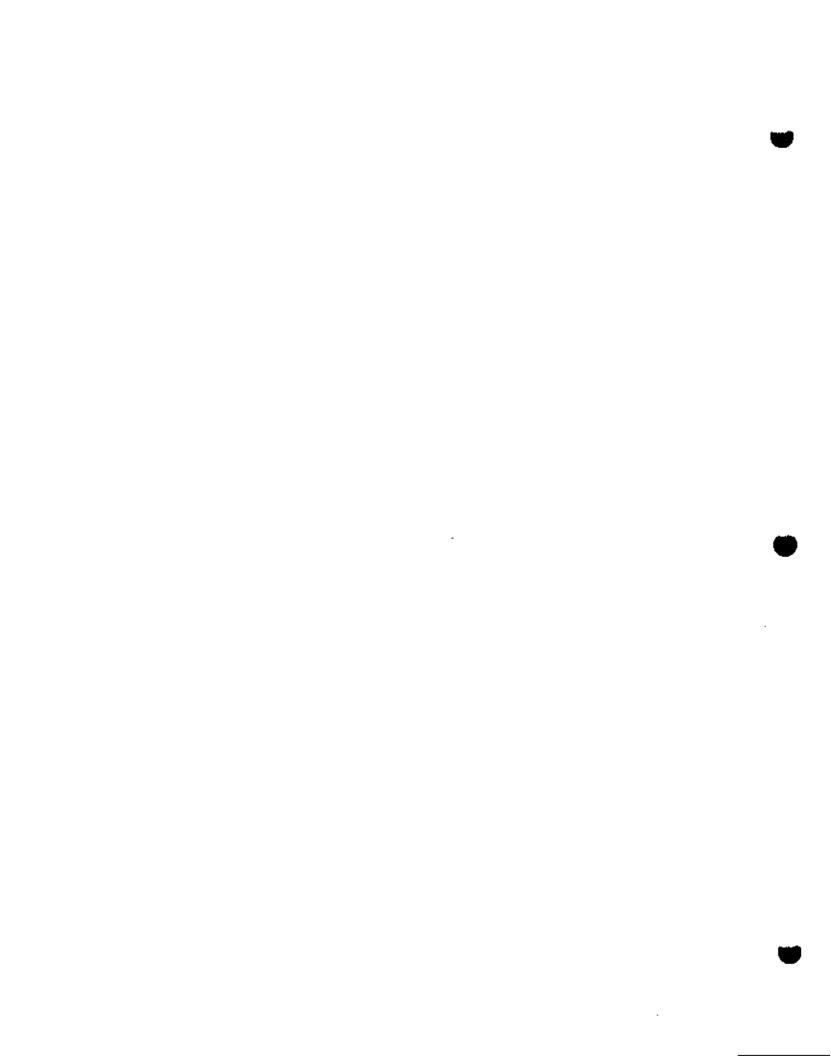
- 7. <u>Monitoring</u>. Thorough inspections or surveys conducted on a regular basis to determine the presence and prevalence of pests or disease vectors.
- 8. <u>Nuisance Pests</u>. Insects, other arthropods, and other organisms that do not cause economic damage or adversely affect human health, but which cause minor annoyance on occasion.
- 9. On-Site Supervision. Supervision that includes being physically located on the installation, but not necessarily at the specific work site, during the work performance and able to be contacted and to be present at the work site within 30 minutes.
- 10. <u>Personal Relief</u>. Pest management control efforts made by Marine Corps personnel or their family members at their own expense for the control of pests in accordance with DoD and Marine Corps pest management policy.
- 11. <u>Pest Management OAE</u>. A DoD employee trained in pest management and who protects the Government's interest through on-site performance evaluations of commercial pest management contracts or other contracts that involve the use of pesticides.
- 12. <u>Pesticide</u>. Any substance or mixture of substances, including biological control agents, that may prevent, destroy, repel, or mitigate pests and that are specifically labeled for use by the EPA. Also, any substance or mixture of substances used as a plant regulator, defoliant, desiccant, disinfectant, or biocide. (See Restricted-Use Pesticide, definition paragraph 14105.21). Note: The AFPMB does not review or approve disinfectants or biocides.
- 13. <u>Pesticide Applicator</u>. Any individual who applies pesticides or supervises the use of pesticides by others.
- a. <u>Certified Pesticide Applicator</u>. Any individual who applies pesticides or supervises the use of pesticides and who has been authorized to do so by successfully completing a training program approved by the EPA, followed by formal certification by the DoD or a state. Outside the Continental United States (OCONUS) the DoD provisions described in appendix I apply to individuals who apply pesticides or supervise the use of pesticides.
- b. <u>DoD-Certified Pesticide Applicators</u>. DoD military or civilian personnel certified in accordance with the DoD Plan for

the Certification of Pesticide Applicators of Restricted Use Pesticides.

- c. <u>Installation Pesticide Applicators</u>. DoD employees or contract personnel whose job responsibilities involve the application of pesticides on DoD installations and property.
- d. <u>State-Certified Pesticide Applicators</u>. Persons certified in accordance with FIFRA by a state with an EPA-approved certification plan.
- e. <u>Uncertified Installation Pesticide Applicators</u>. Marine Corps employees who are not certified under the DoD or state plan during an apprenticeship period not exceeding 2 years must apply pesticides under the supervision of a DoD or state-certified applicator.
- 14. <u>Pest Management</u>. The prevention and control of disease vectors and pests that may adversely affect the Marine Corps mission or military operations; the health and well-being of people; or structures, material, or property.
- 15. Pest Management Consultant. Professional DoD pest management personnel located at Component Headquarters, field operating agencies, major commands, facilities engineering field divisions or activities, or area support activities that provide technical and management guidance for the conduct of installation pest management operations. Some pest management consultants may be designated by a DoD Component as certifying officials.
- 16. <u>Pest Management Coordinator</u>. The individual officially designated by the installation commander to coordinate and oversee the installation pest management program and installation pest management plan. Pest management coordinators must be certified as pesticide applicators if their job responsibilities require them to apply or supervise the use of pesticides.
- 17. <u>Pest Management Materiel</u>. Equipment or pesticides used to monitor, prevent, or control pests and disease vectors. Equipment items include, but are not limited to, all pesticide dispersal equipment, traps, nets, and pest-attracting or pest-repelling devices.
- 18. <u>Pest Management Plan</u>. A long-range, comprehensive installation planning and operational document that establishes the strategy and methods for conducting a safe, effective and environmentally sound integrated pest management program.

Written pest management plans are required as a means of establishing and implementing an installation pest management program.

- 19. <u>Pests</u>. Arthropods, birds, rodents, nematodes, fungi, bacteria, viruses, algae, snails, marine borers, snakes, weeds, and other organisms (except for human or animal disease-causing organisms) that adversely affect readiness, military operations, or the well-being of personnel and animals; attack or damage real property, supplies, equipment, or vegetation; or are otherwise undesirable.
- 20. <u>Professional Pest Management Personnel</u>. DoD military officers commissioned in the Medical Service or Biomedical Sciences Corps or DoD civilian personnel with college degrees in biological or agricultural sciences who are in a current assignment that includes pest management responsibilities exercised regularly. DoD civilian employees also must meet Office of Personnel Management qualification standards. Based on assignment, some professional pest management personnel are pest management consultants.
- 21. Restricted-Use Pesticide. A pesticide that the Administrator of the EPA (in accordance with FIFRA) or a state regulatory agency determines to have the potential to cause unreasonable and adverse effects on the environment or human health when applied in accordance with its directions for use, and therefore requires additional regulatory restrictions.
- 22. <u>Surveillance</u>. Thorough inspections or surveys made before or after pest management treatments to determine the presence and prevalence of pests or disease vectors.
- 23. <u>TIM</u>. Technical guidance prepared by the AFPMB on specific pest management and disease vector control topics. TIM are available from the AFPMB, Forest Glen Section/Walter Reed Army Medical Center, Washington, DC 20307-5001.



CHAPTER 14

PESTICIDE POLLUTION PREVENTION

SECTION 2: MARINE CORPS POLICY

- 14200. GENERAL. Marine Corps policy is to comply with the DoD requirements set forth in appendix I and to employ an integrated pest management program that minimizes pesticide use and that ensures the protection of human health and the environment where pesticide use is necessary. MOU's between DoD and a state/locality for the use of pesticides may also apply. The policy and guidance in OPNAVINST 6250.4 are incorporated by reference.
- 1. Establish and maintain safe, effective, and environmentally sound IPM programs to prevent or control pests and disease vectors that may adversely impact readiness or military operations by affecting the health of personnel or by damaging structures, material, or property.
- 2. Ensure that pest management programs achieve, maintain, and monitor compliance with all applicable EO's and applicable Federal, state, and local statutory and regulatory requirements.
- 3. Incorporate sustainable IPM philosophy, strategies, and techniques into all vector control and pest management planning, training, and operations, including installation pest management plans and other written guidance to reduce pesticide risk and prevent pollution.
- 14201. <u>GOALS</u>. In accordance with the DoD specifications described in appendix I, Marine Corps goals have been established:
- 1. By the end of FY97, 100 percent of Marine Corps installations will have pest management plans prepared, reviewed, and updated annually by pest management professionals.
- 2. By the end of FY98, 100 percent of Marine Corps installation pesticide applicators will be properly certified (either through the DoD or appropriate state). Direct-hire employees must have a maximum of 2 years of experience after initial employment to become certified. Contract employees should have the appropriate

state certification when the contract is let. Installations must implement the pest management program elements to achieve these goals.

3. By the end of FY00, the amount of pesticide applied annually on Marine Corps installations will be reduced by 50 percent from the FY93 baseline in pounds of active ingredient. The goal for this MOM must not be achieved by substituting more toxic pesticides that have lower application rates than the pesticide in use.

14202. INTEGRATED PEST MANAGEMENT (IPM)

- 1. IPM must be based on seven routine steps for addressing each pest problem as follows:
 - a. Identify and assess pest or disease vector problems;
- b. Develop a written management plan or strategy that emphasizes natural controls and nonchemical tactics to deal with pest and disease vector problems;
- c. Establish an action threshold for each pest and disease vector problem to define when corrective action must be implemented;
- d. Use a monitoring procedure, such as inspection, trapping, or surveillance, for each pest and disease vector;
- e. Apply corrective action when a threshold is reached for any pest or disease vector;
- f. Use a documentation system to catalogue monitoring information and to document management problems; and
- g. Verify and evaluate procedures to ensure that the IPM program is meeting stated risk-reduction measures and that information exists to redesign the IPM plan where required.
- 2. The written IPM plan or strategy must be a comprehensive document as outlined in appendix I.
- 14203. <u>INSTALLATION PEST MANAGEMENT PLANS</u>. Each installation must have a pest management plan as described in appendix I. The plan must list all program objectives, arranged in order of

priority, according to potential or actual impact on health, morale, structures, materiel, or property. Installations that have more than 0.5 productive work-years of pest management work must have their own plan. Installations with less than 0.5 productive work-years must have an individual plan, or be included in a supporting installation's pest management plan. Professional pest management personnel or certified pesticide applicators must manage these installation programs. For more information on Pest Management Plans, see appendix F-1.

14204. <u>INSTALLATION CONSULTATIVE SUPPORT</u>, PROGRAM REVIEWS, AND AUDITS

- 1. <u>Command Program Reviews</u>. To ensure adequate oversight of Marine Corps Pest Management Programs, pest management consultants or designated pest management professionals will conduct on-site reviews of installation pest management programs at least every 36 months, normally as part of the Marine Corps Environmental Compliance Evaluation (ECE) program, with the following exceptions.
- a. Installations requiring less than 0.5 work-years of pest management services must be reviewed at the discretion of the cognizant pest management consultant.
- b. Installations that receive pest management support from another installation must be reviewed during the review of the supporting installation.
- c. Installations with documented pest management problems, such as deficiencies from environmental compliance audits, state inspections, or Federal inspections, should be reviewed annually until the deficiencies are resolved.
- d. On-site review requirements can be met by formal program reviews, ECE's, and/or assistance visits.
- 2. Installations must notify the appropriate pest management consultant whenever Federal, state, or local regulators ask to inspect pest management operations.
- 14205. TRAINING AND CERTIFICATION OF PEST MANAGEMENT PERSONNEL. For requirements relating to the training and certification of pest management personnel, see appendix F-2.

14206. PESTICIDES AND PEST MANAGEMENT EQUIPMENT

1. Procurement

- a. AFPMB must approve all introduction, stockage, and deletion of pest management material managed by the Defense Logistics Agency (DLA) for use in DoD programs. See appendix I for procedural information on the acquiring of pest management equipment and pesticides.
- b. Marine Corps installations must not produre or acquire pest management material that has not been recommended by the AFPMB or approved by the cognizant Marine Corps pest management consultant. NSN's must not be assigned to pest management material that has not been approved by the AFPMB. Upon approval by the appropriate pest management consultant, pest management material may be produced locally if needed for an emergency, if required due to unique local situations, or if required in quantities so small that assignment of an NSN is not practical.
- 2. <u>Pesticide Storage Facilities</u>. The design of pesticide storage facilities must comply with standards described in MTL-HDBK 1028/8, Military Handbook. Existing facilities must comply with all applicable regulatory standards and will, where feasible, be modified to meet the standards for new pesticide storage facilities.
- 3. <u>Pesticide Disposal</u>. Installation commanders must ensure that installation pest management programs are managed so that pesticides do not become HW's. The installation pest management coordinator must ensure that excess EPA-registered pesticides are either returned to the DLA Materials Return Program, transferred to a DoD installation able to use the material, or transferred to the servicing DRMO. The appropriate DoD pest management consultant will, if requested, provide assistance in identifying installations where usable pesticides could be applied. When the EPA publishes a proposed pesticide regulatory action that involves pesticide label suspension or cancellation affecting the DoD, installations must comply with administrative procedures developed between the DLA and AFPMB. Installations must use the guidance in AFPMB TIM 21, Pesticide Disposal for Pest Control Shops for pesticide disposal.
- 4. <u>Pesticide Safety</u>. To ensure the safe use of pesticides, Marine Corps personnel must handle and apply pesticides in accordance with the product's label directions and AFPMB TIM 14, Personal Protective Equipment for Pest Management Personnel;

- TIM 15, Pesticide Spill Prevention and Management; TIM 16, Pesticide Fires: Prevention, Control, and Cleanup; and TIM 21, Pesticide Disposal Guide for Pest Control Shops (see TIM definition paragraph 14105.23). Marine Corps policy prohibits construction of buildings with heating, ventilation, and air-conditioning (HVAC) ducts located in and below the floor to prevent accidental contamination of the ducts with termiticides. Similarly, Marine Corps policy prohibits post-construction treatment of structures with HVAC ducts without a waiver from Marine Corps pest management consultant.
- 5. <u>Electrically Operated Devices</u>. Except as noted in AFPMB TIM 25, Devices for electrocution of Flying Insects (see TIM definition paragraph 14105.23) Marine Corps personnel must not use electromagnetic exclusion or control devices, ultrasonic repellent or control devices, and outdoor devices for electrocuting flying insects on Marine Corps installations. However, indoor devices for electrocuting flying insects can be used when selected, purchased, located, and used in accordance with AFPMB TIM 25 (see TIM, definition paragraph 14105.23). Pest surveillance traps and monitoring equipment, such as nonelectrocuting mosquito light traps, must be used as integral tools for IPM programs.
- 6. Paints and Coatings Containing Pesticides and other Biocides. The Marine Corps explicitly prohibits the use of paints containing insecticides on Marine Corps property. This guidance applies to both interior or exterior paints that contain insecticides intended for application to broad structural surfaces such as walls, ceilings, and siding. It also applies to insecticides formulated and labeled for use as paint additives. Paints containing fungicides as mildew inhibitors may be used when application directions specify no special restrictions due to the fungicide. Approved marine antifouling compounds or coatings may be applied to protect the surfaces of watercraft.
- 7. Preventive or Scheduled Pesticide Treatments. The Marine Corps explicitly prohibits the use of regularly scheduled, periodic pesticide applications, except in situations where the installation pest management plan clearly documents that no other technology or approach is available to protect personnel or property of high value. Installations must not use preventive pesticide treatments unless the appropriate pest management consultant has given approval based upon current surveillance information or records documenting past disease vector or pest problems that require this approach.

14207. PEST MANAGEMENT CONTRACTING

- 1. <u>Background</u>. The Marine Corps must use pest management contracts when cost-effective or when advantageous for non-routine, large-scale, or emergency services, especially when specialized equipment or expertise is needed. Contractors must comply with the regulatory requirements of the state in which the work will be performed regarding the certification, licensing, and registration of pest management companies and their employees. OCONUS contractors must comply with the Final Governing Standards (FGS)/Japan Environmental Governing Standards (JEGS) or the Overseas Environmental Baseline Guidance Document (OEBGD) of the host country.
- 2. Review and Approval. Pest management consultants must review and approve contract documents for pest management operations, including augmentation contracts to ensure that appropriate pest management standards and IPM are specified. Contracting offices must award augmentation contracts only when the respective pest management consultant has verified that the contract will provide necessary services beyond the capability of any in-house staff. Installations that lack expertise in pest management should request the services of a DoD pest management consultant to develop the technical portions of pest management contracts in accordance with DoD/AFPMB Guideline Performance Work Statement for Contract Pest Control. Pest management consultants must act as technical consultants during the performance of contracted work.
- 3. <u>Quality Assurance</u>. Installation commanders must base pest management QAE staffing decisions on the following factors:
- a. The number of pest management operations requiring 100 percent inspection,
- b. The number of different functions being performed simultaneously,
- c. The scope of the contract including required productive work-years, and
- d. The level of monitoring or surveillance required for each operation.

14208. SPECIALIZED PEST MANAGEMENT OPERATIONS

- 1. Aerial Application of Pesticides. Documentation for aerial application projects must be kept in accordance with DoD and Marine Corps environmental requirements including compliance with the requirements of NEPA. A designated pest management consultant at the major command level or higher, who is certified in the aerial application pest control category, approves all proposed pest management projects that involve the aerial application of pesticides. Approval must be obtained before aerial application operations commence. Marine Corps pest management consultants must collaborate, as appropriate, with the 910th Airlift Wing (Air Force Reserve) during the review and approval process for aerial spray projects to be completed by the 910th. Installation commanders must ensure that installation personnel update documentation for project approval if subsequent aerial application operations are planned.
- 2. <u>Disinfection of Military Aircraft</u>. Marine Corps personnel must disinfect military aircraft for disease vectors and agricultural pests only when:
 - a. Required by a foreign nation as a prerequisite to entry.
- b. Mandated by the United States Department of Health and Human Services or the United States Department of Agriculture (USDA).
- c. Directed by a command-level or higher authority who has determined that the point of embarkment has active vector-borne disease, consistent with Joint Service regulation, Quarantine Regulations of the Armed Forces.
- d. No passengers are on board (except when mandated by the DoD Foreign Clearance Guide).
- 3. Forest Pests. Marine Corps commanders must cooperate with the USDA, Forest Service, on applicable pest management programs, including annual USDA funding for forest insect and disease suppression projects on Marine Corps-controlled land in accordance with the Memorandum of Agreement (MOA) between the USDA and the DoD for conduct of Forest and Insect Disease Suppression on Lands Administered by the DoD, December 1990; see also the Joint Service Technical Manual, Weed Control and Plant Growth Regulation.

- 4. <u>Medically Important Pests</u>. The Marine Corps must ensure that responsibilities for surveillance and control of medically important insects and other arthropods are clearly delineated in installation pest management plans and operational plans. Specific guidance on the surveillance and control of Lyme disease vectors is found in AFPMB TIM 26, Lyme Disease-Vector Surveillance and Control (see TIM, definition paragraph 14105.23).
- 5. <u>Nuisance Pests</u>. Installation pest management personnel must not apply pesticides or other control procedures for nuisance pests unless such measures have been approved by the appropriate pest management consultant.
- Pesticide Applications in the Range of Endangered Species. The Marine Corps must comply with regulations, including those issued under the ESA, which require Federal Agencies to ensure that their actions will not jeopardize endangered or threatened species (ETS) or associated habitat. Installation commanders must ensure that their installation pest management plans identify areas within their installation that contain ETS and that personnel using pesticides on the installation know the potential impact that posticide applications could have on ETS. DoD pest management plans must comply with the ETS protection efforts of the USFWS and USFWS limitations on pesticide usage. To prevent consultations before every pesticide application or operation in the habitat of an ETS, pertinent sections of installation pest management plan must be submitted to the regional USFWS office for review and comment. Further coordination with the USFWS is not required unless the conditions of the pesticide applications are changed as indicated by county bulletins, pesticide labels, ETS status, or land use. If the USFWS arrives at a finding of "may affect" the ETS and if the pesticide application is considered a firm Marine Corps requirement by the Marine Corps installation commander and cognizant pest management professional, the Marine Corps installation commander must request a formal consultation with the USFWS. OCONUS installations must comply with the FGS/JEGS and OEBGD.
- 7. <u>Pests in Health Care Facilities</u>. Installation commanders must ensure that pest management in health care facilities is conducted according to the guidance in AFPMB TIM paragraph 14105.20, Pest Management in Health Care Facilities (see TIM, definition paragraph 14105.23).

8. <u>Pest Management in Child Care and Food Service Facilities</u>. Installation commanders must ensure that responsibilities for surveillance and control of insects and other arthropods in child care and food service facilities are clearly delineated in installation pest management plans and operations.

9. Pest Management in Military Quarters and Housing

a. <u>Background</u>. Installation commanders must ensure that residents of military quarters and housing practice good sanitation and correct minor nuisance pest problems. Quarters and housing occupants are responsible for controlling pests such as cockroaches, household infesting ants, and mice not originating in other quarters. The control of medically important pests, including venomous arthropods, which could affect human health, and structural pests which could damage property, must not be an occupant's responsibility.

b. Installation Role

- (1) Installation commanders must ensure that installation pest management services are provided in military housing only when the pest threatens Government property or the occupants' health and when the occupants have been unable to control the pests through self-help efforts. Exceptions must only be made with the concurrence of the appropriate pest management consultant.
- (2) Installation commanders may allow residents of military housing to contract with licensed pest management companies at their own expense.

c. Self-Help Program

(1) Installation commanders must establish installation self-help pest management for military housing when cost-effective and when IPM monitoring indicates the need for a self-help program. Self-help pest management materials issued to occupants of military housing may include cockroach and ant baits and/or traps, mouse traps, glue boards, and general-use pesticide aerosols with crack and crevice devices as recommended by the cognizant pest management consultant. Liquid pesticides should not be issued. The office designated to manage the installation's self-help program should coordinate procurement and the storage of pest management materials with the installation pest management shop, hazardous material manager, and the DLA Supply Center.

- (2) Installation commanders must ensure that self-help personnel provide written instructions and appropriate precautions, beyond those on pesticide labels, to military quarters' and housing occupants to ensure proper pesticide application and safety.
- (3) If pesticides are issued to occupants, records must be maintained as described in paragraph 14104.g. These records should enable installation self-help personnel to validate the occupant's attempts to control target pests before providing installation pest management services. Pest management consultants should review these records during annual reviews to evaluate the efficiency of the installation's self-help program.
- 10. <u>Pest Management at Closing Installations</u>. Because pests may cause serious damage to unused facilities, commanders must ensure that pest management consultants provide guidance needed to protect all closing or closed facilities from pests from the beginning of deactivation until property disposal.
- 11. <u>Quarantinable Pests</u>. The Joint Service, Quarantine Regulations of the Armed Forces contains policy for quarantine regulations applicable to the Armed Forces.
- 12. Stored Products Pests. Installation commanders must implement measures to minimize insect and vertebrate pest damage to subsistence, clothing and textiles, medical, and other infestible stored materiel according to AFPMB TIM 27 (see TIM, definition paragraph 14105.23), Stored Products Pest Monitoring Techniques. Commanders must ensure that the fumigation of subsistence stocks follows the guidance provided in AFPMB TIM 11 (see TIM, definition paragraph 14105.23), Hydrogen Phosphide Fumigation with Aluminum Phosphide. Guidance for protecting Meal, Ready-to Eat Rations is available from the pest management consultants. DLA Regulation 4145.31, Stored Product Pest Management Program, provides pest management guidance on infestible stored products.
- 13. <u>Turf and Ornamental Pests</u>. Installation commanders must implement measures to prevent unacceptable damage to shade trees, ornamental plantings, and turf (including golf courses) by insects, diseases, and weeds. Further, they must ensure that pesticide applications, if required, are based on the specific identification of the target pest by trained personnel. The pest management plan must identify recurring infestations. Installation commanders must ensure that the installation pest management plan describes the use of IPM for turf and ornamental

pests and for environmentally and economically beneficial land management practices, such as the use of native plants to reduce pesticide use.

- 14. <u>Undesirable Plants</u>. Installation commanders must develop programs to comply with the Federal Noxious Weeds Act. Installation commanders must:
- a. Designate an office or person adequately trained in the management of undesirable plant species to develop and coordinate the installation undesirable plant management program.
- b. Plan, program, and budget to achieve, maintain, and monitor compliance with the Federal Noxious Weeds Act.
- c. Ensure that installations complete and carry out cooperative agreements with state agencies regarding the management of undesirable plant species on installations.
- d. Establish integrated management systems to control or contain undesirable plant species targeted under cooperative agreements. The Federal Noxious Weeds Act does not require the Components to carry out programs on installations unless similar programs are being implemented on state or private lands in the vicinity of the installation.
- 15. <u>Vertebrate Pests</u>. Installation commanders must manage vertebrate pests in accordance with the MOA between the DoD and USDA/APHIS/ADC and:
- a. Implement vertebrate pest management programs including wildlife aircraft strike hazard reduction programs to prevent interference with operations, destruction of real property, and adverse impacts on health and morale;
- b. Cooperate with Federal, state, and local agencies that have implemented animal damage control programs on adjacent public and private lands;
- c. Identify the potential for secondary and non-target effects to other organisms and design programs to preclude or minimize the risks;
- d. Obtain all applicable Federal, state, and local permits; and
 - e. Use guidance in AFPMB TIM 37 (see TIM, definition

paragraph 14105.23), Feral Cats, for conducting feral cat control programs.

- 16. <u>Weed Control</u>. Installation commanders must ensure that weed control is performed according to 16 U.S.C. 1001 (reference (n)) and Joint Service Technical Manual, Weed Control and Plant Growth Regulation, on Marine Corps installations. Herbicides will not be used in war except as provided for in EO 11850, Renunciation of Certain Uses in War of Chemical Herbicides, April 8, 1975.
- 17. <u>Wood-Destroying Organisms</u>. Installation commanders must ensure that:
- a. Pest management consultants review construction, repair, and termite control contract specifications for the proper protection of wood where wood-destroying fungi and insects are present, and specify that termiticides, when needed, are applied at the highest EPA-labeled concentration and application rate.
- b. DoD-certified posticide applicators or QAE's trained in pest management inspect contract applications of pesticides for the control of termites and other wood-destroying organisms.
- c. Trained personnel inspect wooden buildings and structures in the range of termites: annually in USDA geographic Region 1 or if Formosan or drywood termites are present; biennially in USDA Region 2; or triennially in Region 3, as determined by the cognizant pest management professional. Installation commanders must follow the guidance in AFPMB TIM 35 (see TIM, definition paragraph 14105.23), Termite Inspection, for these inspections.
- 18. <u>Wood Preservation</u>. Naval Facilities (NAVFAC) MO 312, Wood Protection provides information on wood preservation. Commanders must ensure that DoD pest management professionals review construction specifications and procurement contracts to minimize losses to real property and material by specifying:
- a. Proper use of wood products treated with preservatives (pesticides) where required to protect against losses caused by wood-destroying fungi and insects.
- b. Inspection of treated wood products, performed by trained installation personnel. This inspection must require at a minimum:

- (1) The examination of treated wood products to determine the presence of the American Lumber Standard Committee accredited inspection agency quality marking. Quality markings indicate conformance with the appropriate American Wood Preservers' Association and American National Standard Institute standards. Quality markings indicate that the product has been tested by the agency indicated, the date it was tested, the type use (above ground, ground contact, or marine contact suited), and the minimum amount of chemical preservative present. Unmarked material shall be tested by an independent third party. Certificates of conformance from the treating company must not be accepted in place of physical inspection and testing.
 - (2) Random or planned sampling and testing.
- c. Programs to protect waterfront structures from decay and marine borers are implemented, as necessary.
- 14209. PEST MANAGEMENT AND DISEASE VECTOR CONTROL DURING MILITARY CONTINGENCY OPERATIONS, READINESS TRAINING EXERCISES, AND DEPLOYMENTS
- 1. Complying with the DoD Pest Management Program. Military, civilian personnel, and contractors responsible for pest management and disease vector control during military contingency operations, readiness training exercises, and deployments must apply pesticides consistent with the policies and procedures described in appendix I.
- Application. The application of pesticides for pest management and disease vector control during military, contingency operations, readiness training exercises, and deployments must be under the overall direction of personnel certified in accordance with the DoD Plan for the Certification of Applicators of Restricted Use Pesticides. Individuals who apply pesticides in these situations must be certified in accordance with the DoD Plan or must be under the direct or on-site supervision of individuals certified in accordance with the DoD Plan. Shipboard independent duty technicians and other military personnel who have received special training for limited site application of pre-selected pesticides during military operations or deployments are exempt from the certification requirement. However, these individuals must be fully trained, including hands-on training for these specific applications. Commanders must develop specific site training programs for these individuals and a means to document who has received this

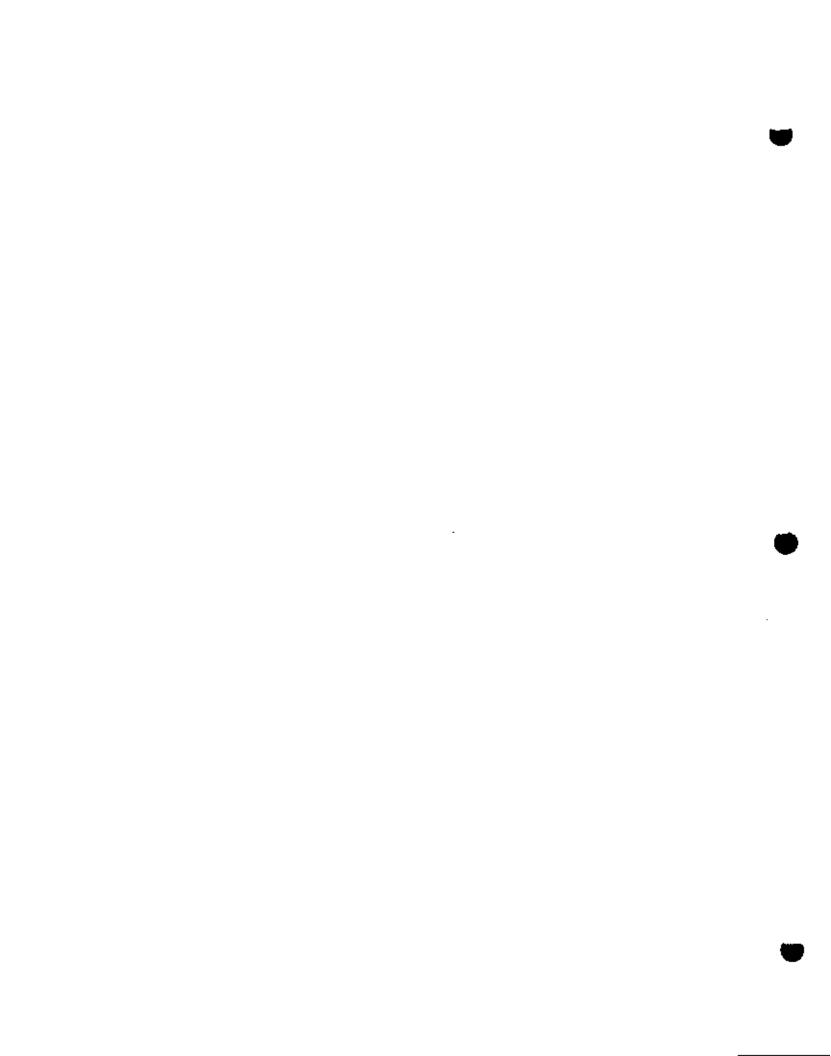
training. At a minimum, the training must include the safe use and proper application of the limited, pre-selected pesticides for the specific site for which these individuals are trained.

- 3. <u>Contractors</u>. Contractors who apply pesticides in these situations must comply with the FGS/JEGS and OEBGD of the host country.
- 4. <u>Recordkeeping</u>. Installation commanders must ensure that pesticide use in these situations is recorded completely and accurately.

14210. REPORTS AND RECORDS

- 1. Recordkeeping. Marine Corps must maintain complete daily records of pesticide applications and non-chemical pest management operations using DD Form 1532-1 or a computer-generated equivalent. These records must account for all shop operations and must provide an historic record of pest management operations and pesticide applications for each building, structure, or outdoor site.
- a. Records must include information on kinds, amounts, uses, dates, places of application, applicators names, and certification numbers.
- b. The record must include all pesticide applications performed on the installation, including work done on golf courses, by nonappropriated fund activities, by contract services, and as part of outleases and land management and forestry programs, as well as work performed by installation pest management shops.
- 2. <u>Pest Management Report</u>. DD Form 1532, Pest Management Report (RCS DD-6250-02), or a computer-generated equivalent, must be produced monthly using DD Form 1532-1 information and must be forwarded at least quarterly to major command headquarters for review and oversight.
- 3. <u>Consultants</u>. Pest management consultants must use this data to evaluate the efficiency of the overall installation pest management program and pest management operations.
- 4. <u>Exclusions</u>. Pesticides applied by installation personnel for their own relief are excluded from the recordkeeping requirement.

5. NAVFAC Engineering Field Division/Activity (EFD/EFA). Many of the functions and records supporting Marine Corps installation pesticide programs are performed, prepared, and maintained by the supporting NAVFAC EFD/EFA.



CHAPTER 14

PESTICIDE POLLUTION PREVENTION

SECTION 3: RESPONSIBILITIES

14300. <u>CMC (LF)</u>

- 1. Establish and maintain programs that conform to the policy, procedures, and requirements specified in appendix I.
- 2. Emphasize IPM techniques in pest management programs as a means to reduce pesticide risk and prevent pollution.
- 3. Exercise oversight and review of installation pest management programs from the Marine Corps major command and headquarters level.
- 4. Maintain accurate and complete reporting and recordkeeping of pest management operations and pesticide use.
- 5. Ensure that actions taken under the policies outlined in this chapter are consistent with the DoD environmental security specifications.
- 6. Ensure the implementation of IPM in the Marine Corps pest management programs, operations, regulations, publications, pest management training, and pesticide applicator certification programs.
- 7. Coordinate pest management actions, as appropriate, with the Assistant Secretary of Defense for Health Affairs, with state and local governments, and with host-nation agencies involved with pest management when human health is an issue.
- 8. Ensure that the Marine Corps pest management consultants review installation pest management programs on-site at least every 36 months as part of the ECE program.
- 9. Designate Marine Corps senior pest management consultants as the primary points of contact for the Marine Corps pest management program and for membership on the AFPMB in support of the Defense Environmental Security Council, and inform the Executive Director, AFPMB, of these designated consultants.

- 10. Designate pest management consultants, as certifying officials under the DoD Plan for the Certification of Pesticide Applicators of Restricted Use Pesticides, to certify the competency of the Marine Corps pesticide applicators; establish procedures for designating and certifying specific DoD pest management consultants in aerial application pest control to approve pest management projects requiring the aerial application of pesticides; and inform the Executive Director, AFPMB, of these designated consultants.
- 11. Implement pest management MOM and answer data calls for the MOM's from the Deputy Under Secretary of Defense, Environmental Security (DUSD(ES)).
- 12. Cooperate with state and local government agencies involved with pest management.
- 13. Participate in the development of the Defense Environmental Security Corporate Information Management (DESCIM) process for pest management and use the pest management information system when fielded.
- 14. Monitor and track the u^{\pm} of IPM and reduction of pesticide use in installation pest manage ant programs.
- 15. Ensure that each installation has a pest management plan and that the Marine Corps pest management consultants maintain the program through technical assistance, program review, and program oversight.
- 16. Ensure that installations receive state-of-the-art technical assistance in IPM. Ensure that pest management consultants who are designated pest management professionals are available on request to provide technical assistance for the pesticide portion of ECE's and to provide follow-up assistance to ECE's.
- 17. Comply with OPNAVINST 6250.4.
- 18. Provide support to Marine Corps installations and Marine Corps commands/units and tenants by interpreting Federal, state, local, and overseas pest management regulatory requirements and by uniformly applying Marine Corps policy as set forth in this Manual.
- 19. Conduct special environmental compliance and protection studies with regard to pest management to assist in establishing policy or initiating actions.

- 14301. CG/CO OF MARINE CORPS INSTALLATIONS AND COMMANDER MARINE FORCES RESERVE (COMMARFORRES) AND ALL INSTALLATIONS, UNITS, AND MARINE FORCES RESERVE (MARFORRES), INCLUDING SHIPS, STATIONS, AND DEPLOYED PERSONNEL WHERE PEST MANAGEMENT OPERATIONS ARE PERFORMED
- 1. Establish and maintain programs that conform to the policy, procedures, and requirements specified in appendix I.
- Emphasize IPM techniques in their post management programs as a means to reduce pesticide risk and prevent pollution.
- 3. Exercise oversight and review of installation pest management programs from the Marine Corps major command and headquarters level.
- 4. Maintain accurate and complete reporting and recordkeeping of pest management operations and pesticide use.
- 5. Implement programs to achieve, maintain, and monitor compliance with applicable Federal, state, and local statutory and regulatory requirements for post management.
- 6. Ensure that commanders of deployed forces enforce the use of all appropriate personal protection measures, including arthropod skin and clothing repellents and bed nots, to protect their troops from vector-borne diseases and rodont and arthropod health threats.
- 7. Ensure that any pesticide applications, excluding arthropod skin and clothing repellents, performed during military operations are recorded using DD Form 1532-1. Fest Management Maintenance Report, or a computer-generated equivalent, and establish a method to archive these records for permanent retention.
- 8. Ensure the implementation of IPM in the Marine Corps pest management programs, operations, regulations, publications, pest management training, and pesticide applicator certification programs.
- 9. Coordinate pest management actions, as appropriate, with the Assistant Secretary of Defense for Health Affairs, with state and local governments, and with host-nation agencies involved with pest management when human health is an issue.

- 10. Ensure that the Marine Corps pest management consultants review installation pest management programs on-site at least every 36 months as part of ECE's, and annually review installation pest management plans for adherence to the DoD specifications described in appendix I.
- 11. Establish procedures to ensure that recommendations from on-site pest management program reviews and annual reviews of pest management plans will result in appropriate corrective action.
- 12. Monitor pesticides available for purchase in Marine Corps commissaries and exchanges to ensure the pesticides available for sale are least-hazardous pesticides that are compatible with DoD IPM programs and are posticides that comply with applicable Federal, state, and local laws. Marine Corps commissaries and exchanges OCONUS must comply with the FGS/JEGS and OEBGD of the host country.
- 13. Cooperate with state and local government agencies involved with pest management.
- 14. Participate in the development of the DESCIM process for pest management and use the p s management information system when fielded.
- 15. Provide management support, resources, and a professionally qualified pest management staff sufficient to ensure the effective implementation of pest management programs at all organizational levels.
- 16. Establish surveillance programs to assess potential adverse environmental or public health effects from pesticide use and to monitor the health and safety of persons who apply pesticides.
- 17. Monitor the use of IPM and the reduction of pesticide use in installation pest management programs.
- 18. Ensure that each installation has a pest management plan and that the Marine Corps pest management consultants maintain the program through technical assistance, program review, and program oversight. Installation commanders must:
- a. Plan and budget for the development and maintenance of the pest management plan;

- b. Ensure that qualified personnel develop and update the pest management plan annually;
- c. Designate a DoD-certified or state-certified pesticide applicator as the pest management coordinator to implement the plan;
- d. Ensure that the pest management coordinator formally coordinates appropriate portions of the pest management plan with the senior medical officer, environmental coordinator, and senior engineering officer and ensure that these individuals sign the cover sheet of the pest management plan;
- e. Ensure that appropriate portions of the pest management plan are reviewed by the natural resources program manager for consistency with the natural resources management plan;
- f. Ensure that the pest management coordinator forwards the pest management plan to the cognizant pest management consultant for review, technical approval, and signature on the cover sheet;
- g. Approve and sign the pest management plan for implementation;
- h. Ensure implementation of the pest management plan and oversight of the installation pest management program by the pest management coordinator; and
- i. Ensure that all pest management operations performed on the installation, except those for personal relief, are recorded, and ensure that all records are properly maintained and are reported to the cognizant component pest management consultant.
- 19. Comply with OPNAVINST 6250.4.
- 20. Coordinate these functions with the supporting Naval Facility Engineering Command (NAVFACENGCOM), EFD, or EFA, as appropriate.
- 21. Identify and submit to the CMC (LFL) and the CMC (LFF) project documentation and funding requests for posticide pollution prevention management that are required to maintain compliance with applicable existing and emerging regulations and permits. Program and budget for personnel, equipment, materials, training, and monitoring required to comply with posticide pollution prevention management requirements. Pay appropriate Federal, state, and local fees. Ensure that the environmental

management hierarchy (EMH) is employed, pollution prevention alternatives evaluated, and life-cycle cost impacts assessed, in evaluating and selecting projects that address compliance requirements.

14302. ALL INSTALLATIONS, UNITS, AND MARINE FORCES RESERVE (MARFORRES), INCLUDING SHIPS, STATIONS, AND DEPLOYED PERSONNEL WHERE PEST MANAGEMENT OPERATIONS ARE PERFORMED

- 1. Establish and maintain programs that conform to the policy, procedures, and requirements specified in appendix J.
- 2. Emphasize IPM techniques in their pest management programs as a means to reduce pesticide risk and prevent pollution.
- 3. Exercise oversight and review of installation pest management programs from the Marine Corps major command and headquarters level.
- 4. Maintain accurate and complete reporting and recordkeeping of pest management operations and pesticide use.
- 5. Implement programs to achie maintain, and monitor compliance with applicable Federal, state, and local statutory and regulatory requirements for pest management.
- 5. Ensure that commanders of deployed forces enforce the use of all appropriate personal protection measures, including arthropod skin and clothing repellents and bed nets, to protect their troops from vector-borne diseases and rodent and arthropod health threats.
- 7. Ensure that any pesticide applications, excluding arthropod skin and clothing repellents, performed during military operations are recorded using DD Form 1532-1, Pest Management Maintenance Report, or a computer-generated equivalent, and establish a method to archive these records for permanent retention.
- 8. Ensure the implementation of IPM in the Marine Corps pest management programs, operations, regulations, publications, pest management training, and pesticide applicator certification programs.
- 9. Coordinate pest management actions, as appropriate, with the Assistant Secretary of Defense for Health Affairs, with state and

local governments, and with host-nation agencies involved with pest management when human health is an issue.

- 10. Ensure that the Marine Corps pest management consultants review installation pest management programs on site at least every 36 months as part of ECE's. Installation pest management plans must be reviewed annually for adherence to the specifications in appendix I.
- 11. Establish procedures to ensure that recommendations from on-site pest management program reviews and annual reviews of pest management plans will result in appropriate corrective action.
- 12. Monitor pesticides available for purchase in Marine Corps commissaries and exchanges to ensure that the pesticides available for sale are least-hazardous pesticides that are compatible with DoD IPM programs and are pesticides that comply with applicable Federal, state, and local laws. Marine Corps commissaries and exchanges OCONUS must comply with the FGS/JEGS and OEBGD of the host country.
- 13. Cooperate with state and local government agencies involved with pest management.
- 14. Participate in the development of the DESCIM process for pest management and use the pest management information system when fielded.
- 15. Provide management support, resources, and a professionally qualified pest management staff sufficient to ensure the effective implementation of pest management programs at all organizational levels.
- 16. Establish surveillance programs to assess potential adverse environmental or public health effects from pesticide use and to monitor the health and safety of persons who apply pesticides.
- 17. Monitor the use of IPM and reduction of pesticide use in installation pest management programs.
- 18. Ensure that each installation has a pest management plan and that the Marine Corps pest management consultants maintain the program through technical assistance, program review, and program oversight. Installation commanders must:

- a. Plan and budget for the development and maintenance of the pest management plan;
- b. Ensure that qualified personnel develop and update the pest management plan annually;
- c. Designate a DoD-certified or state-certified pesticide applicator as the pest management coordinator to implement the plan;
- d. Ensure that the pest management coordinator formally coordinates appropriate portions of the pest management plan with the senior medical officer, environmental coordinator, and senior engineering officer and ensure that these individuals sign the cover sheet of the pest management plan;
- e. Ensure that appropriate portions of the pest management plan are reviewed by the natural resources program manager for consistency with the natural resources management plan;
- f. Ensure that the pest management coordinator forwards the pest management plan to the cognizant Component pest management consultant for review, techn. I approval, and signature on the cover sheet;
- g. Approve and sign the pest management plan for implementation;
- h. Ensure the implementation of the pest management plan and oversight of the installation pest management program by the pest management coordinator; and
- i. Ensure that all pest management operations performed on the installation, except those for personal relief, are recorded, and ensure that all records are properly maintained and are reported to the cognizant component pest management consultant.
- 19. Comply with OPNAVINST 6250.4.
- 20. Many of these functions are performed by the supporting NAVFACENGCOM, EFD, or EFA.

CHAPTER 15

POLLUTION PREVENTION

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CHAPTER 15

POLLUTION PREVENTION

SECTION 1: INTRODUCTION

15100. <u>PURPOSE</u>. This chapter establishes Marine Corps policy and responsibilities for compliance with pollution prevention and Toxic Release Inventory (TRI) reporting requirements under the EPCRA and the Pollution Prevention Act (PPA), as set forth by Executive Order (EO) 12856, Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements, August 3, 1993, and in keeping with DoD policy and guidance.

15101. APPLICABILITY. See paragraph 1101.

15102. BACKGROUND

- 1. <u>Laws</u>. In addition to the PPA and EPCRA, the following statutes contain pollution prevention requirements: the Federal Facilities Compliance Act; the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); the Resource Conservation and Recovery Act (RCRA); the Clean Air Act (CAA); the Energy Policy Act (EPACT); and the Clean Water Act (CWA).
- 2. <u>EO's</u>. The following EO's require pollution prevention activities: EO 12856, Federal Compliance with Right-to Know Laws and Pollution Prevention Requirements, August 3, 1993; EO 12873, Federal Acquisition, Recycling, and Wasto Prevention, October 20, 1993; EO 12843, Procurement Requirements and Policies for Federal Agencies for Ozone Depleting Substances, April 22, 1993; EO 12844, Federal Use of Alternative Fueled Vehicles (AFV), April 22, 1993; EO 12898, Federal Actions to Address Environmental Justice in Minority and Low Income Populations, March 14, 1994; and EO 12902, Energy Efficiency and Water Conservation at Federal Facilities, March 8, 1994.
- 3. <u>Relationship of Pollution Prevention to Other Environmental Program Areas</u>. Pollution prevention is a cross-cutting program with relevance to most other environmental program areas.

- a. For AFV and energy conservation requirements, see chapter 6 of this Manual.
- b. For pollution prevention requirements pertaining to emergency planning and response, see chapter 7 of this Manual.
- c. For Marine Corps policy on meeting RCRA hazardous waste (HW) minimization requirements, see chapter 9 of this Manual.
- d. For a discussion on National Environmental Policy Act documentation relating to pollution prevention planning, see chapter 12 of this Manual.
- e. For Marine Corps policy on pesticide pollution prevention, see chapter 14 of this Manual.
- f. For Marine Corps water conservation policies, see chapter 16 of this Manual.
- g. For Marine Corps policy on solid waste (SW) reduction and recycling, see chapter 17 of this Manual.
- h. For nonpoint source 'llution prevention requirements, see chapter 20 of this Manual.
- i. For Marine Corps policy on ozone depleting substances (ODS), see MCO 5090.1 and specifications in a MCBul in the 5090 series.

15103. FEDERAL STATUTES

- 1. PPA of 1990 (42 U.S.C. 13101 et seg.). This Act establishes the national policy that "pollution should be prevented or reduced at the source whenever feasible; pollution that cannot be prevented should be recycled in an environmentally safe manner, whenever feasible; pollution that cannot be prevented or recycled should be treated in an environmentally safe manner whenever feasible; and disposal or other release into the environment should be employed only as a last resort and should be conducted in an environmentally safe manner."
- 2. <u>CERCLA of 1980.</u> as Amended (42 U.S.C. 9601 et seg.). This Act is intended to provide funding and enforcement authority for cleaning up waste disposal sites and for responding to hazardous substance (HS) spills. CERCLA establishes a comprehensive

response program for past HW activities and the planning and response framework for HS releases.

- 3. EPCRA of 1986 (42 U.S.C. 11001 et seq.). This Act, which is title III of the Superfund Amendments and Reauthorization Act, encourages and supports emergency planning and requires that the public receive timely and comprehensive information about possible or potential hazards associated with toxic chemical (TC) releases. Most notably, specific sections of EPCRA require immediate notification of releases of extremely hazardous substances (EHS) and HS's defined under CERCLA to state and local emergency response planners. EPCRA requires state and local coordination in planning response actions to chemical emergencies. The Act also requires the submission of information on chemical inventories and releases.
- 4. EPACT of 1992 (Public Law 102-486). EPACT seeks to enhance the Nation's long-term energy security by reducing dependency on imported oil and improving energy efficiency and to reduce air emissions from fossil fuels. EPACT establishes a Federal leadership strategy which encourages automobile manufacturers and fuel suppliers to expand the commercial availability of alternative fuels and AFV's. Under EPACT, Federal agencies must acquire increasing numbers of AFV's, reduce energy consumption, and increase energy efficiency.
- 5. <u>CAA of 1970, as Amended (42 U.S.C. 7401 et seq.)</u>. The 1990 Amendments to the CAA mandate pollution prevention measures, such as the use of clean fuels and AFV's.
- 6. RCRA of 1976 (42 U.S.C. 6901 et seq.). The 1984 Hazardous and Solid Waste Amendments to RCRA encourage pollution prevention by requiring HW generators to certify that they have developed programs capable of reducing the volume, quantity, and toxicity of their waste as part of their biennial report. RCRA also requires Federal agencies to establish affirmative procurement programs.
- 7. <u>CWA of 1977, as Amended (Public Law 95-217, 33 U.S.C. 1251 et seg.)</u>. The 1987 Amendments to the CWA establish the regulation of stormwater discharges from industrial facilities and require states to establish nonpoint source pollution management programs that identify best management practices for reducing nonpoint source pollution.

15104. REQUIREMENTS

EO 12856, August 3, 1993

- a. EO 12856 requires the DoD to conduct its facility management and acquisition activities so that, as much as possible, the quantity of TC's entering any waste stream, including releases into the environment, is reduced expeditiously through source reduction; that waste generated is recycled as much as possible; and that any remaining wastes are stored, treated, or disposed of in a manner protective of public health and the environment.
- b. EO 12856 requires the Marine Corps to establish a goal to reduce by 50 percent its total releases and off-site transfers for treatment and disposal of TC's by December 31, 1999, from a 1994 baseline. The 1994 baseline and reduction goal measurement includes only those chemicals that were on the list of TC's as it existed on January 1, 1994. Each installation must strive to achieve this 50 percent reduction. As much as possible, such reductions must be achieved through source reduction practices.
- c. Each Marine Corps fa 'ity not scheduled for operational closure by December 31, 1997, who required to develop a written pollution Prevention Plan by the end of 1995, setting forth the facility's contribution to the 50 percent goal. In addition, the Marine Corps is required to review its standardized documents, including specifications and standards, and to identify opportunities to eliminate or reduce its use of EHS's and TC's, consistent with the safety and reliability requirements of its mission.
- d. Annual TC releases and off-site transfers for treatment and disposal must be determined from data submitted in accordance with section 313 of EPCRA (TRI Form R reporting), pursuant to EO 12856. As of calendar year 1994, all Federal agencies must comply with the provisions in sections 301-304, 311-312, and 313 of EPCRA; all implementing regulations; and future amendments. The effective date for compliance with EPCRA, section 313, was July 1, 1995. Under section 313, a facility that has 10 or more full-time employees and manufactures or processes any listed TC in excess of 25,000 pounds (1b), or otherwise uses any listed TC in a quantity over 10,000 lb in a CY, must submit individual release data, Form R, for each applicable TC. The annual submission date is July 1, unless otherwise changed by the Environmental Protection Agency (EPA).

2. PPA

- a. The PPA establishes the following environmental management hierarchy (EMH);
 - (1) Source reduction,
 - (2) Recycling,
 - (3) Treatment, and
 - (4) Disposal,
- b. Source reduction activities are the most desirable option as they often reduce the amount of nonproduct output generated by a manufacturing process and result in lower life-cycle costs. In addition, source reduction reduces the volume and toxicity of pollution versus simply transferring it from one medium to another. Source reduction generally includes "in-process recycling" or "reuse," but not "out-of-process recycling."
- <u>Defense Acquisition and Mandatory Procedures for Major</u> Acquisition Programs and Major Automated Information Systems Acquisition Programs. See appendix O and DoD Regulation 5000.2-R. Mandatory Procedures for Major Defense Acquisition Programs (MDAPs) and Major Automated Information System Acquisition (MAIS) Programs, for information on policy, responsibilities, and procedures for integrating pollution prevention requirements into all aspects of DoD acquisition programs, including weapons systems acquisition programs. DoD Service Acquisition Executives, Program Executive Officers, and Program Managers must consider using pollution prevention as an integral element of systems, system components, and associated support items in all program phases (entire system life-cycle), including the revision of standardized documents, military specifications and standards, technical manuals/orders/bulletins, and other related documents.

4. DoD Pollution Prevention Requirements

a. Comply with applicable Federal, state, and local environmental laws, regulations, and standards as well as with relevant EO's. Installations located outside the United States should comply with applicable EO's, international agreements, Federal statutes with extraterritorial effect, and with either the Final Governing Standards (FGS)/Japan Environmental Governing

Standards (JEGS) or the Overseas Environmental Baseline Guidance Document when no FGS/JEGS has been issued.

- b. Reduce the use of hazardous materials (HM), the generation or release of pollutants, and the adverse effects on human health and the environment caused by DoD activities.
- c. Reduce pollution through improvements in energy and water efficiency, the use of alternative fuels, and other activities that improve resource utilization.
- 5. <u>Environmental Compliance</u>. See chapter 4 of this Manual for information on policy, responsibility, and procedures for achieving compliance with applicable EO's, and Federal, state, interstate, and regional statutory and regulatory environmental requirements.

15105. TERMS AND DEFINITIONS

- 1. <u>AFV</u>. Passenger cars or trucks (light-duty vehicles) and heavy-duty trucks or buses that have been designed or modified to operate on alternative fuels 3 defined in 42 U.S.C. 6374(q)(2).
- 2. <u>Article</u>. A manufactured item that is formed to a specific shape or design during manufacture and has functions dependent in whole or in part upon its shape or design during end-use and which does not release, or otherwise result in exposure to, a TC under normal conditions of use.
- 3. Authorized Use List (AUL). The list of all HM necessary to support the requirements of a command, facility, or activity, developed per DoD specifications defined in DoD Regulation 5000.2-R, Mandatory Procedures for Major Defense Acquisition Programs and Major Automated Information System (MAIS) Acquisition Programs.
- 4. Environmentally Preferable. Products or services that have a lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose. This comparison may consider raw materials acquisition, production, manufacturing, packaging, distribution, reuse, operation, maintenance, or disposal of the product or service (from EO 12873, October 20, 1993, section 201).
- 5. <u>EMH</u>. National policy established by the PPA that "pollution should be prevented or reduced at the source whenever feasible;

pollution that cannot be prevented should be recycled in an environmentally safe manner, whenever feasible; pollution that cannot be prevented or recycled should be treated in an environmentally safe manner whenever feasible; and disposal or other release into the environment should be employed only as a last resort and should be conducted in an environmentally safe manner."

- 6. <u>Environmental Quality Classes</u>. These environmental compliance classes are designated by DoD as described in chapter 3 of this Manual.
- 7. <u>Facility</u>. All buildings, equipment, structures, and other stationary items that are located on a single site or on contiguous or adjacent sites and that are owned or operated by the same person, otherwise known as the "host" or the "fenceline owner." For the purposes of section 304 of EPCRA, the term includes motor vehicles, rolling stock, and aircraft.
- 8. <u>Hazardous chemical (HC)</u>. A chemical that is a physical or health hazard as defined in 29 CFR 1910.1200, Occupational Safety and Health (OSH) Act Hazard Communication Standard.

9. <u>HM</u>

- a. In general, any material, which because of its quantity, concentration, or physical, chemical, or infectious characteristics, may pose a substantial hazard to human health or the environment. Included in this definition are all EHS's, HC's, HS's, and TC's.
- b. For the following list of hazardous materials, consult other hazard-specific guidance (instructions or directives) that takes precedence over this Manual; ammunition, weapons, explosives and explosive-actuated devices, propellants, pyrotechnics, chemical and biological warfare materials, medical and pharmaceutical materials, medical waste and infectious materials, bulk fuels, radioactive materials, and other materials such as asbestos and mercury.
- 10. <u>Hazardous Materials Consolidation Program (HCP)</u>. The Marine Corps-wide program to achieve life-cycle control and management of HM through the application of sound management practices that minimize the types and quantities of HM procured, stored, distributed, and used to accomplish mission requirements at commands and installations.

- $12.~{
 m HW}.~{
 m A}$ SW or combination of SW's which because of its quantity, concentration, or physical, chemical, or infectious characteristics may:
- a. Cause, or significantly contribute to, an increase in mortality or an increase in serious, irreversible or incapacitating, reversible illness.
- b. Pose a substantial hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed. Note that state regulations may be more stringent and take precedence over Federal regulations.
- 13. <u>ODS's</u>. Are substances controlled internationally under the Montreal Protocol and nationally under title VI of the CAA Amendments. ODS's include both class I and class II substances as follows:
- a. "Class I substance." Any substance designated as class I in 57 Federal Register 33753, including chlorofluorocarbons, halogens, carbon tetrachloride, methyl chloroform, and any other substance so designated by the EPA by regulation at a later date.
- b. "Class II substance." Any substance designated as class II in 57 Federal Register 33753, including hydrochlorofluorocarbons and any other substance so designated by the EPA by regulation at a later date.
- 14. <u>Pollution/Pollutants</u>. Refers to all nonproduct outputs, regardless of any recycling or treatment that will or may reasonably be anticipated to, cause deleterious effects to the public health or the environment. All nonproduct outputs, regardless of any recycling, treatment, or management, that may prevent or mitigate releases into the environment.

15105

- 15. <u>Pollution Prevention</u>. Refers to "source reduction," and recycling as defined in the PPA and other practices that reduce or eliminate the creation of pollutants through:
- a. Increased efficiency in the use of raw materials, energy, water, or other resources.
- b. Protection of natural resources by conservation (see the definition of "Source Reduction" below).
 - c. Examples of pollution prevention techniques include:
 - (1) Input substitution.
 - (2) Product reformulation.
 - (3) Process redesign/modification.
 - Improved operation and maintenance.
 - (5) Reuse (in-process recycling).
- 16. <u>PACE</u>. Marine Corps process intended to promote the implementation of pollution prevention techniques to solve compliance issues while reducing the life-cycle cost of environmental compliance efforts.
- 17. <u>Qualified Recycling Program (ORP)</u>. An organized operation that diverts or recovers scrap or waste streams, and that identifies, segregates, and maintains the integrity of the recyclable materials in order to maintain or enhance the marketability of the materials. See also chapters 3 and 17 of this Manual.

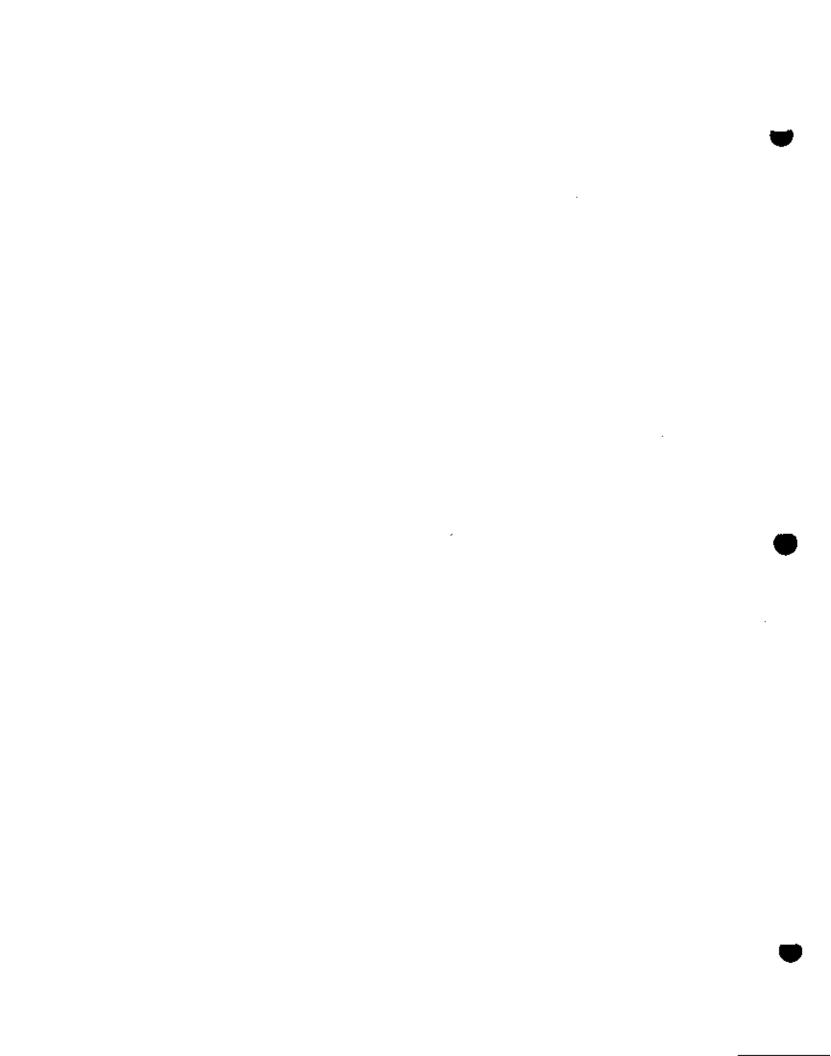
18. QRP Materials

- a. <u>Excluded Materials</u>. Excluded materials may not be sold through a QRP, and the proceeds from their sale will not be returned to a QRP. Excluded items are listed in chapter 17 of this Manual.
- b. Other ORP Materials. Other QRP materials are materials that fit neither the definition of recyclable materials nor the definition of excluded materials.
- c. <u>Recovered Materials</u>. Waste materials and by-products that have been recovered or diverted from solid waste but such

term does not include those materials and by-products generated from and commonly reused within an original manufacturing process (42 U.S.C. 6903).

- d. Recyclable Materials. Recyclable materials can include, but are not limited to high quality paper and paper products; mixed paper, newspaper, cardboard; plastic; metal cans; glass; used oil (except when the oil is a HW); batteries; and tires. Other items that may be included in a QRP are scrap (including ferrous and nonferrous scrap) and firing range expended brass and mixed metals gleaned from firing range cleanup that do not require demilitarization. Previously used materials that are used in place of a raw or source material in the manufacturing process are not considered waste.
- 19. Recycling. The series of activities, including collection, separation, and processing, by which products or other materials are recovered from the SW stream for use in the form of raw materials in the manufacturing of new products other than fuel for producing heat or power by combustion (from EO 12873, October 20, 1993, section 207). Recycling also includes using, reusing, or reclaiming materials, as well as processes that regenerate a material or recover a usable product from it.
- 20. <u>Source Reduction</u>. Source reduction, as defined in the PPA, is any practice that:
- a. Reduces the amount of any HS, pollutant, or contaminant entering any waste stream or otherwise released into the environment (including fugitive emissions) prior to recycling, treatment, and disposal; and
- b. Reduces the hazards to public health and the environment associated with the release of such substances, pollutants, or contaminants.
- c. The term includes equipment or technology modification, process or procedure modification, reformulation or redesign of products, substitution of raw materials, and improvements in housekeeping, maintenance, training, or inventory control. Source reduction does not entail any form of waste management (e.g., recycling, treatment, and disposal).
- 21. <u>Source Separation</u>. The separation of recyclable materials at their point of generation by the generator.

- 22. TC. A chemical as defined in 42 U.S.C. 11023 (c). Any substance listed in 40 CFR 372, Toxic Chemical Release Reporting Regulations.
- 23. Waste Minimization.
 - a. Source reduction and the following types of recycling:
 - (1) Beneficial use/reuse, and
 - (2) Reclamation.
- b. Waste minimization does not include recycling activities whose uses constitute disposal or burning for energy recovery.



CHAPTER 15

POLLUTION PREVENTION

SECTION 2: MARINE CORPS POLICY

15200. GENERAL. The Marine Corps will employ pollution prevention to eliminate or minimize environmental and other life-cycle costs and to reduce or eliminate the generation of pollution. Where cost-effective, Marine Corps installations must implement source separation for recycling and develop a single authorized QRP. See chapters 3 and 17 of this Manual for more information on QRP's.

- 15201. <u>GOALS</u>. In accordance with DoD policy, the Marine Corps PACE process, and the DoD Pollution Prevention Strategy, Marine Corps pollution prevention goals are:
- 1. By the end of Calendar Year 1999 (CY99), to reduce total releases and off-site transfers of TC's 50 percent from the 1994 TRI inventory baseline. The amount of toxic releases and off-site transfers will be measured and reported in pounds.
- 2. By the end of CY99, to reduce the disposal of HW 50 percent from the 1992 baseline. The amount of HW disposal will be measured and reported in pounds.
- 3. By the end of CY99, to reduce the disposal of nonhazardous SW 50 percent from the 1992 baseline. The amount of SW disposal will be measured and reported in pounds.
- 4. By the end of CY99, to ensure that 50 percent of nonhazardous SW generated will be recycled. The amount of nonhazardous SW recovered and sold DoD-wide for reuse will be measured and reported in 1bs.
- 5. By the end of CY99, to ensure that 75 percent of DoD acquisitions of new, nontactical vehicles are AFV's.
- 6. By FY00, to increase investments in pollution prevention funding to 30 percent of combined pollution prevention and compliance funding.

- 7. By the end of FY00, to reduce the amount of pesticide in 1b's of active ingredients applied annually on DoD installations by 50 percent from the 1993 baseline.
- 8. By FY00, to achieve a reduction in facilities energy consumption, as measured in millions of British Thermal Units (Btu)/1000 ft², by 20 percent from the 1985 baseline.
- 9. By FY05, to identify and accomplish all energy and water conservation actions that pay back in 10 years or less.
- 10. By FY05, to achieve a reduction in facilities energy consumption, as measured in millions of Btu's/1000 ft², by 30 percent from the 1985 baseline.
- 11. By FY05, to achieve an increase in industrial facilities energy use efficiency by 20 percent from the 1990 baseline.
- 15202. <u>PRACTICES</u>. To achieve pollution prevention goals and accomplish the provisions outlined in DoD policy, Marine Corps installations will:
- 1. Reduce the amount of HM used and HW generated by up-front HM control in procurement, supply, and use by employing the Marine Corps HCP. The HCP strives to reduce the amount of HM used and HW generated through HM life-cycle control and the management of HM. The goals of the HCP are to reduce unnecessary risks and costs associated with the disposal of excess or expired shelf-life HM, protect the environment, ensure safety, and enhance readiness. The HCP employs sound HM management practices, including establishing and enforcing HM AUL's.
- 2. Establish methods for substituting non or less HM whenever possible.
- 3. Develop and incorporate new technology or materials which have a reduced impact upon the environment, are safer and healthier, or result in reduced emissions.
- 4. Promote the use of environmentally preferable products and services.
- 5. Emphasize pollution prevention, including improvements in energy and resource use, as the alternative of "first choice" in achieving compliance with applicable environmental requirements and EO's.

- 6. Incorporate pollution prevention at installations and into all phases of acquisition, operations, maintenance, support, and the ultimate disposal of weapon systems over the system life cycle.
- 7. Instill knowledge and understanding in all personnel (military and civilian) of pollution prevention requirements through comprehensive education, training, career development, and awareness programs.
- 8. Promote pollution prevention through positive relations and partnerships with Federal, state, Native American tribal, and local government officials, as well as host country and other private and public stakeholders.
- 9. Develop, demonstrate, and implement innovative pollution prevention technologies and business practices.
- 10. Use the EMH to develop solutions to environmental compliance issues.
- 11. Reduce weapons systems life-cycle cost by avoiding the use of HM.
- 12. Plan, program, and budget to achieve these policies, using the environmental quality classes (defined in chapter 3 of this Manual) to prioritize environmental projects for funding.
- 13. Ensure, where cost effective, that all installations and activities have, or participate in, QRP's, and that these recycling programs are available to serve all host and tenant organizations occupying space on the installation, including leased space. See chapters 3 and 17 of this Manual for more information on QRP's.
- 15203. TRAINING. Marine Corps installations must provide specific and general awareness pollution prevention training, as appropriate to successfully integrate pollution prevention into all functional areas. At a minimum, general awareness training should encourage all members of the Marine Corps to participate in pollution prevention activities and programs. Examples of specific pollution prevention training include training in EPCRA, TRI reporting, and pollution prevention planning and implementation, to include, for example, housekeeping practices, process modifications, or how to conduct a pollution prevention opportunity assessment.

15204. PLANNING

15204

- 1. Every Marine Corps installation not scheduled for operational closure by 31 December 1997 was required to have developed a pollution prevention plan by the end of 1995. That plan must address the necessary facility actions for reducing pollution from all sources and to all media. Facility pollution prevention plans must be developed in accordance with the Marine Corps Pollution Prevention Planning Guide, and with the Model Pollution Prevention Plan Technical Paper. The pollution prevention plans should include pollution information for the baseline years, pollution prevention opportunity assessments, investment strategies, and pollution prevention techniques such as HM consolidation, recycling, improved control technologies, and material sharing programs. Plans should be based on a comprehensive understanding of total chemical use at the facility.
- 2. Investment/implementation options selected in the pollution prevention plans should reflect the following priorities:
 - a. Life-cycle cost-effectiveness;
- b. Compliance (e.g., those pollution prevention projects that help achieve/maintain compliance will receive high priority);
- c. Ranking in the environmental management hierarchy (e.g., source reduction is preferable to recycling);
- d. Achieving Marine Corps pollution prevention goals (see paragraph 15201);
 - e. Ease of implementation; and
 - f. Proven technologies.
- 3. Every Marine Corps installation should have a hazardous waste minimization plan and a stormwater pollution prevention plan. These plans and any others (e.g., a SW management plan or an ODS's phase-out plan) that an installation may have or may develop must either be referenced in or incorporated into installation pollution prevention plans.
- 4. Pollution prevention plans are living documents and should be updated annually to reflect new technologies, investment strategies, or environmental requirements.

- 15205. COMPLYING WITH THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT (EPCRA) SECTION 313. All Marine Corps installations in the customs territory of the United States must comply with section 313 of EPCRA.
- 1. <u>Defining the Facility</u>. For the purposes of EPCRA, all installations must define the facility fenceline. Installations must update Inter-Service Support Agreements (ISSA) to reflect the data-collection requirements of Marine Corps commands/units and tenants.
- a. The facility fenceline is most appropriately defined by Class I property lines with the fenceline owner responsible for all DoD tenants. The fenceline owner, otherwise known as the "host" command, must file one report for the entire facility for each section of EPCRA requiring a report.
- b. Marine Corps installations are not responsible for reporting actions of non-DoD Federal agencies.
- 2. TRI Reporting Criteria. Unless scheduled for operational closure by December 31, 1997, all installations must determine whether the facility meets reporting requirements for TRI Reporting, EPA Form R. Each Marine Corps installation that exceeds any of the three thresholds is subject to the EPA Form R reporting requirements. Host commands must ensure that thresholds are calculated using the entire inventory of the installation. Base TRI reporting requirements on the following criteria:
 - a. The facility has 10 or more full-time employees; and
- b. The facility manufactured (includes imported) or processed a TC in quantities in excess of 25,000 lb over the course of a CY; or
- c. The facility otherwise used a TC in quantities in excess of 10,000 lb over the course of a CY.
- 3. Exemptions. Certain statutory exemptions are intended to exclude some uses of TC's because the installations are not necessary for the primary mission of the facility and because of the difficulties inherent in tracking small or diffuse quantities of listed chemicals. Three primary categories exist under the exemptions, including personal use, article, and de minimis. In general, the personal use exemption does not apply to TC's manufactured, processed, or otherwise used in support of the

primary mission. Guidance on the applicability of exemptions can be found in the Revised Implementation Guidance for EO 12856, August 3, 1993.

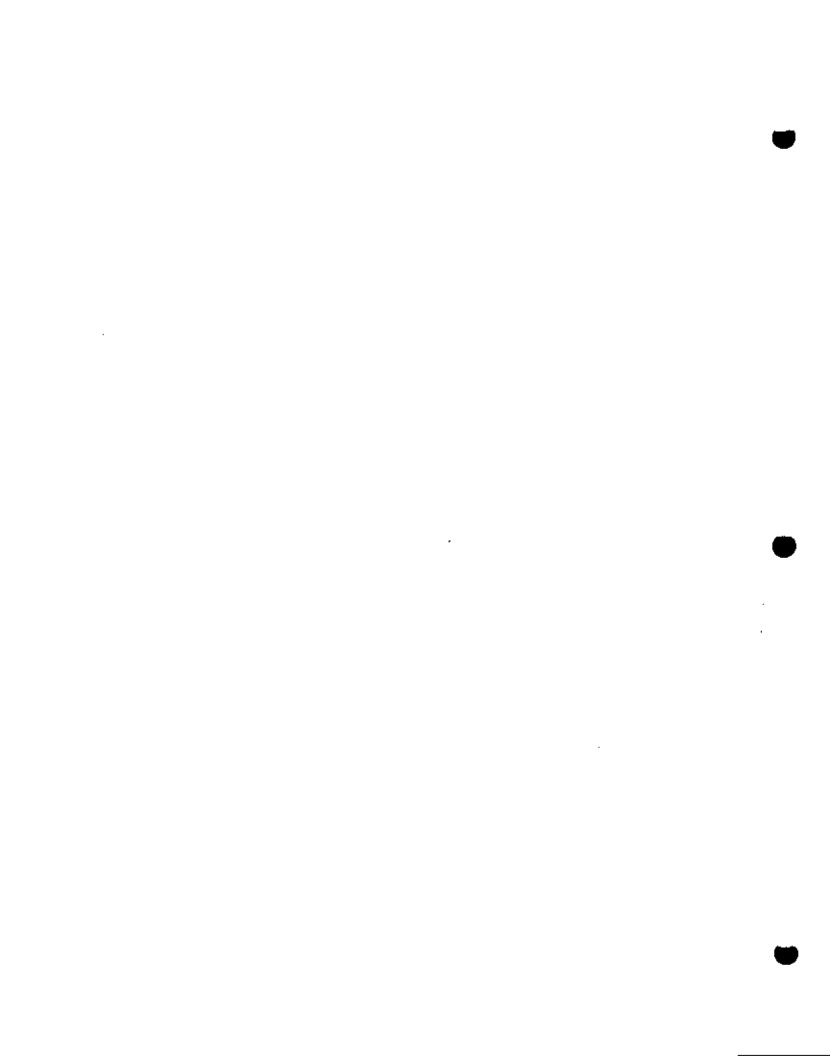
- 4. <u>Classified Information</u>. Prior to releasing any report, installations must review the information to prevent the release of classified information.
- 5. TRI Report Submittals. All Marine Corps installations must use EPA Form R software to prepare their annual TRI reports/Form R's. TRI report submittals are due to the EPA by July 1 each year for the preceding calendar year. Installations must submit a copy of each signed TRI Report (RCS DD-5090-04) report concurrently to the CMC (LF) in an EPA Automated Form R-generated diskette.
- 6. Other EPCRA Requirements. Marine Corps policy and planning for EPCRA sections 301-304 and 311-312 are described in chapter 7 of this Manual.

15206. <u>POLLUTION PREVENTION APPROACH TO COMPLIANCE EFFORTS</u> (PACE)

- 1. <u>Background</u>. Rising costs have compelled the Marine Corps to reevaluate its approach to compliance. Traditionally, environmental projects have focused on costly end-of-the-pipe solutions (i.e., treatment). Now, through the PACE initiative, the Marine Corps will reduce the life-cycle cost of environmental compliance. Once fully implemented, this initiative will enable all Marine Corps installations both to meet today's compliance requirements and to alleviate future compliance costs, by implementing pollution prevention techniques to address compliance issues.
- 2. <u>Project Reviews</u>. As part of the PACE initiative, Marine Corps installations must categorize all environmental projects to determine whether all or part of an environmental project employs pollution prevention solutions. Projects that contribute to the Marine Corps goal of increasing pollution prevention investments while meeting compliance requirements will have high funding priority.

15207. OUTREACH

- Policy. Marine Corps installations should aggressively seek out new partners and strengthen existing relationships outside the Marine Corps, including industries, regulators, universities, communities, and non-governmental organizations. The goals of such partnerships are to share information technologies and to inform and educate those partners about Marine Corps efforts to increase pollution prevention investments and to meet all applicable compliance requirements.
- Guidance. Guidance for seeking partnerships and relationships is included in the Marine Corps Pollution Prevention Planning Guide.



CHAPTER 15

POLLUTION PREVENTION

SECTION 3: RESPONSIBILITIES

15300. CMC (LF)

- 1. Develop and implement Marine Corps pollution prevention policy and implement applicable pollution prevention requirements.
- 2. Identify pollution prevention opportunities that can be implemented at some or all Marine Corps installations and facilitate the transfer of pollution prevention technology throughout the Marine Corps.
- 3. Develop and maintain installation pollution prevention planning guidance.
- 4. Promote the development of pollution prevention technologies and assist in the implementation of pollution prevention efforts at Marine Corps installations.
- 5. Program, budget, allocate, and prioritize funds for facility installation pollution prevention projects (as identified in installation pollution prevention plans and submitted through the Marine Corps Compliance Tracking System) based on life-cycle cost and environmental compliance criteria and in accordance with DoD guidance and fiscal policies.
- 6. Track the progress of the Marine Corps in achieving pollution prevention goals.
- 7. In conjunction with the Office of the Assistant Secretary of the Navy, Research, Development and Acquisition, develop cooperative and commercially proven solutions for environmental facilities or services (in the United States and overseas) where economically advantageous and consistent with mission requirements. Include the use of acquisition authority and cross-service agreements in accordance with the DoD policy on mutual logistic support as appropriate.
- 8. Promote the concept that pollution prevention-based business practices increase efficiency and mitigate compliance impacts.

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- 9. Develop and implement a methodology whereby installations and commands employ the EMH and life-cycle cost considerations in developing environmental projects.
- 10. Develop guidance and tools to improve pollution prevention program management throughout the Marine Corps.
- 11. Coordinate with the CMC (LP), CMC (SD), MCCDC, and MARCORSYSCOM in reviewing material substitution opportunities.
- 12. Provide support to Marine Corps installations and Marine Corps commands/units and tenants by interpreting Federal, state, local, and overseas pollution prevention program regulatory requirements and by uniformly applying Marine Corps policy as set forth in the Manual.
- 13. Assist installations in resolving disputes with Federal, state, local, and foreign regulatory agencies as required.
- 14. Conduct special environmental compliance and protection studies with regard to pollution prevention management to assist in establishing policy or initiating actions.
- 15. Ensure, through field visits and the Environmental Compliance Evaluation Program, Marine Corps cooperation and compliance with Federal, state, and local regulatory agencies with regard to pollution prevention.

15301. <u>CMC (LP)</u>

- 1. Issue and institutionalize concepts of the Marine Corps HCP for centralized management and control of HM at the command, installation, or activity level, with the objectives of minimizing HM inventories and maximizing the reutilization of HM. Ensure that the HCP concept is incorporated into MCO P4450.12, and that this manual on HM is widely publicized.
- 2. As a management tool for implementing an installation HCP, promote the use of automated HM and HW tracking and environmental reporting software, and ensure that interfaces are developed, as appropriate, between all HM management, environmental reporting, and supply and logistics systems.
- 3. Ensure that MCO 4140.5, which implements DoD 4140.27-M, incorporates the HCP philosophy as it relates to HM managed as shelf-life items. Encourage commands, installations, and

activities that manage or store HM to use MCO 4450.13 for HM shelf-life management, and for criteria for extending type II shelf-life items published in the DoD Quality Status List.

- 4. Coordinate with the CMC (LF), CMC (SD), MCCDC and MARCORSYSCOM in reviewing material substitution opportunities. Ensure that the provisions of MCO 5100.25, are appropriately referenced in both MCO P4450.12 and MCO 4140.5.
- 15302. <u>CMC (SD)</u>. Coordinate with the CMC (LF), CMC (LP), and MARCORSYSCOM in reviewing material substitution opportunities, as appropriate.

15303. MCCDC OUANTICO

- 1. The Director, Doctrine Division (C 42), must incorporate pollution prevention practices and the HCP philosophy or concept into doctrine applicable to the supporting elements.
- 2. The Director, Training and Education Division (C 46), must incorporate pollution prevention practices to include source reduction initiatives and the HCP philosophy or concept into appropriate Marine Corps individual training standards.
- 3. The Director, Requirements Division (C 44), must incorporate pollution prevention practices into combat service support requirement formulations and ensure that the use of HM, if a valid requirement, is supported and justified in mission need statements or operational requirement documents.

15304. COMMANDER MARINE CORPS SYSTEMS COMMAND (COMMARCORSYSCOM), COMMANDER MARINE CORPS LOGISTICS BASES (COMMARCORLOGBASES)

1. Develop policy and guidance for ensuring that pollution prevention is incorporated and that pollution prevention considerations are integrated into all acquisition phases and across the entire life cycle (from concept exploration through system demilitarization and disposal) of all weapons systems acquisition programs, in accordance with the DoD specifications described in appendix O and DoD Regulation 5000.2-R, Mandatory Procedures for Major Defense Acquisition Programs (MDAPs) and Major Automated Information System (MAIS) Acquisition Programs. Pollution prevention activities for fielded weapon systems not

included within the scope of an active acquisition program must be conducted in accordance with appropriate DoD policy.

- 2. Ensure that all Program Executive Officers and Program Managers incorporate pollution prevention into all phases of weapon system acquisition (life-cycle) management, and that all acquisition personnel receive appropriate pollution prevention acquisition education and training.
- 3. Develop and implement Marine Corps policy and guidance for integrating pollution prevention requirements into all aspects of the Marine Corps Acquisition Programs.
- 4. Develop and implement HM elimination/reduction/substitution processes for all systems and operations under their cognizance. These processes must include the identification, evaluation and use of environmentally preferable materials and services that meet the Government's needs.
- 5. Develop and implement an affirmative procurement program in accordance with RCRA and EO 12873, October 20, 1993.
- 6. Revise all Marine Corps-owned standardized documents that have been designated for retention to eliminate or reduce HM references and/or to replace those references with less HM to the extent technically feasible and consistent with mission requirements.
- 7. Establish methods to minimize or eliminate new HM entry into the supply system through a review of specifications, standards, commercial item descriptions, purchase descriptions, and supply support requests, etc. Coordinate with the preparing activity to maximize the elimination of HM requirements in the aforementioned documents.
- 8. If non HM substitutes do not exist, maximize the use of substitutes with the least hazardous characteristics.
- 9. Ensure that an MSDS is obtained and reported per MCO 5100.25, for all HM acquisitions, procurements, or re-procurements.

15305. <u>CG/CO OF MARINE CORPS INSTALLATIONS AND COMMANDER MARINE</u> FORCES RESERVE (COMMARFORRES)

1. Develop and implement both a pollution prevention program and an installation pollution prevention plan in accordance with the

Marine Corps Pollution Prevention Planning Guide. In accordance with EO 12856, August 3, 1993, and related DoD policy and instruction, all Marine Corps installations and activities were required to have developed their initial/baseline pollution prevention plan by the end of 1995 and update the plan annually. All pollution prevention plans and revisions are required to be received by the CMC (LFL) as they are developed and revised.

- 2. Establish and implement procedures to control and manage HM using methods to track and minimize the types, variety, and quantities of HM procured, stored, used, and ultimately disposed, via an HCP. HCP management procedures must include centralized HM information management and material reutilization, development, and enforcement of an HM AUL to prevent unauthorized HM procurement and use and centralized HM storage and issuance to an extent which does not inhibit or conflict with installation or activity mission requirements. HCP goals include reducing unnecessary risks and costs from HM shelf-life expiration, protecting the environment from the disposal of excess or overage HM and enhancing worker safety and ultimately mission readiness.
- 3. Comply with EPCRA, section 313 reporting requirements as described in paragraphs 15104 and 15205 (this requirement only applies to those Marine Corps installations in the customs territory of the United States).
- a. Define the facility fenceline, including all Marine Corps commands/units and tenants, to support EPCRA reporting requirements. Revise and update ISSA's to support these requirements.
- b. Ensure that threshold determinations for all HM used at the installation are performed and that those determinations include all HM used installation-wide.
- c. Ensure that all publicly available data has been reviewed to prevent sensitive or classified information from being released. Sign each EPCRA Form R as the approving official.
- 4. Record, retain, and provide to authorities, as appropriate, information that describes pollution prevention plans and actions as well as the benefits associated with such a plan on installation operations and mission.
- 5. Evaluate pollution prevention decisions by economic analysis techniques, matching the magnitude of the decision being made and considering cost and intangible factors, as applicable.

- 6. Employ the EMH and life-cycle cost analysis as environmental project planning tools, with a particular focus on developing pollution prevention solutions to environmental compliance issues, i.e., PACE. Life-cycle cost analysis should be commensurate with project scope, compliance significance, and potential environmental benefit; should be assessed and initiated at the earliest instance and updated when appropriate; and must be provided as an exhibit to support environmental project budget submissions.
- 7. Provide specific and general awareness training to support pollution prevention program objectives.
- 8. Ensure, where cost effective, that a QRP is implemented in accordance with all applicable laws and guidance. (See chapters 3 and 17 of this Manual.)
- 9. Program and budget for personnel, equipment, materials, training, and monitoring required to comply with pollution prevention requirements, submitting project documentation and funding requests to the CMC (LFL) and the CMC (LFF).

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CHAPTER 16

DRINKING WATER SYSTEMS AND WATER CONSERVATION

SECTION 1: INTRODUCTION

16100. <u>PURPOSE</u>. This chapter establishes Marine Corps policy and responsibilities for compliance with statutory requirements for the protection and conservation of drinking water and irrigation water resources. This chapter also outlines procedures regarding the use of underground injection wells as an effluent disposal method.

16101. APPLICABILITY. See paragraph 1101.

16102. BACKGROUND

- 1. Congress first enacted the Safe Drinking Water Act (SDWA) in 1974. The SDWA amended the Public Health Service Act by creating a new title XIV. entitled "Safety of Public Water Systems." Significant revisions to the SDWA were enacted in 1986, and subsequently in 1996 (see paragraph 16102.2). The SDWA's intent is to ensure the provision of safe drinking water to all persons supplied by a public water system and to protect against the contamination of aquifers which can be used to provide drinking water.
- 2. <u>SDWA Amendments of 1996</u>. The SDWA Amendments of 1996 established the following important new requirements:
- a. Section 102(b) requires the Environmental Protection Agency (EPA) to list unregulated contaminants known to occur in public water systems, that may require regulation under the SDWA, as well as subsequent determination whether or not to regulate such contaminants. For unregulated contaminants, section 125 requires that the EPA Administrator establish criteria for a monitoring program.
- b. Section 102(b) requires the EPA to list unregulated contaminants based on public health concerns, including the effect of such contaminants on infants, children, pregnant women, the elderly, and individuals with serious illness or other subpopulations.

- c. Section 103 requires the EPA to establish national primary drinking water regulations that include maximum contaminant levels based on:
- (1) Analysis of the incremental costs and health risk reduction benefits associated with each alternative maximum contaminant level considered:
- (2) Effects on subpopulations that are identified as likely to be at greater risk than the general population for adverse health effects due to exposure to contaminants in drinking water; and
- (3) Analysis of the incremental costs and health risk reduction benefits associated with each alternative treatment technique considered.
- d. Section 104(b) provides authority for the EPA to promulgate rules for disinfectants and disinfectant byproducts.
- e. According to section 109, the EPA must promulgate standards based on further study or risk analysis for:
 - (1) Arsenic,
 - (2) Sulfate, and
 - (3) Radon.
- f. According to section 110, the EPA must promulgate standards for the recycling of filter backwash water within the treatment process of public water systems.
- g. Section 114(c)(1) requires public water supply systems to provide public notice of:
- (1) Failure to comply with an applicable maximum contaminant level or treatment technique requirement of, or a testing procedure prescribed by, a national primary drinking water regulation;
 - (2) Failure to perform required monitoring;
- (3) The existence of any variance or exemption granted for an inability to meet a maximum contaminant level requirement;

- (4) The concentration level of any contaminant for which the EPA Administrator has required public notice; and
- (5) The EPA Administrator is required to prescribe the manner, form, frequency, and content of such public notice.
- h. Section 114(c)(4) requires public water supply system operators to maintain applicable records and mail annual reports to consumers (consumer confidence reports) on the level of contaminants in the drinking water purveyed by the system. The EPA Administrator must issue regulations by August 6, 1998, on this reporting requirement.
- i. Section 118 specifically prohibits the use of lead in any pipes, plumbing fittings or fixtures, solder, and flux that is used for the installation or repair of public water supply systems and in any plumbing in residential or nonresidential facilities providing water for human consumption.
- j. According to section 123, the EPA must publish minimum standards for operator certification within 30 months of the date of enactment (by February 6, 1998).
- k. According to section 125, public water supply system operators must establish and maintain records relevant to compliance with the SDWA Amendments of 1996, conduct monitoring, and make such information available to the EPA Administrator.
- 1. Section 129 expressly waives sovereign immunity for Federal facilities. It states that each department, agency, and instrumentality of the executive, legislative, and judicial branches of the Federal Government owning or operating any facility in a WHP area; engaged in any activity at such facility resulting, or which may result, in the contamination of water supplies in any such area; owning or operating any public water system; or engaged in any activity resulting, or which may result, in underground injection which endangers drinking water will be subject to and comply with all Federal, state, and local requirements pertaining to such systems. It also specifies that if the EPA Administrator finds that a Federal agency has violated an applicable requirement of the SDWA, the EPA Administrator may issue a penalty order assessing a penalty against the Federal agency in an amount not to exceed \$25,000 per day per violation.
- m. Section 132 requires the EPA to publish guidelines for states to carry out a source water assessment program to define drinking water sources within the state, and to identify the

origins of contaminants within the area to determine the susceptibility of public water systems in the delineated area to such contaminants.

- n. Section 134 requires the EPA publish, by August 6, 1998, guidelines for water conservation plans for public water systems that serve fewer than 3,300 persons, that serve between 3,300 and 10,000 persons, and that serve more than 10,000 persons.
- o. Section 136 authorizes the EPA Administrator to provide for the screening of estrogenic substances in drinking water.

16103. FEDERAL STATUTES

1. SDWA of 1974, as Amended (42 U.S.C. 300(f) et seg.)

- a. The SDWA is divided into six parts:
 - (1) Part A lists definitions.
- (2) Part B establishes national drinking water regulations pertaining to public water systems. The National Primary Drinking Water Regulations (NPDWR) identifies and regulates concentrations of contaminants that may have an adverse effect on human health. The National Secondary Drinking Water Regulations (NSDWR) applies to contaminants that may adversely affect the taste, odor, or appearance of water delivered to public water system users.
- (3) Part C establishes programs to regulate underground fluid injection into aquifers and to protect sole source aquifers, both of which enable states to establish WHP programs.
- (4) Part D provides the EPA Administrator with emergency powers to protect the health of persons threatened by an imminent and substantial endangerment from drinking water contaminants.
- (5) Part E contains general provisions regarding Federal agencies; citizen suits; financial grants for research projects; and monitoring, recordkeeping, and reporting requirements.
- (6) Part F specifies additional requirements to regulate drinking water safety. These requirements pertain to lead contamination in schools, rural water surveys, bottled water standards, and laboratory certification.

- b. Important statutory requirements of the SDWA are summarized as follows:
- (1) Section 1411 specifies that the NPDWR applies to each public water system in each state, except to a public water system which:
- (a) Consists only of distribution and storage facilities (and does not have any collection and treatment facilities);
- (b) Obtains all of its water from, but is not owned or operated by, a public water system to which such regulations apply;
 - (c) Does not sell water to any person; and
- (d) Is not a carrier that conveys passengers in interstate commerce.
- (2) Section 1412 identifies the requirements for national drinking water regulations. It requires the EPA Administrator to identify drinking water contaminants which can be harmful to human health (see paragraph 16102 for the SDWA Amendments of 1996). For each contaminant, the EPA must publish NPDWR, within which are contained Maximum Contaminant Level Goals (MCLG) and Maximum Contaminant Levels (MCL) or treatment techniques for each contaminant. This section also requires the EPA Administrator to publish NSDWR related to the aesthetic qualities of drinking water such as color, taste, and odor.
- (3) Section 1413 delegates to states with approved programs the primary responsibility to enforce compliance by ensuring that public water systems are operated in accordance with national drinking water regulations, and sampling, monitoring, notification, and recordkeeping requirements. The SDWA Amendments of 1996 further emphasize the concept of state primacy for the program.
- (4) Section 1414 provides the EPA with enforcement responsibilities when a state has not taken appropriate enforcement action against a public water system which is out of compliance with the NPDWR. It also requires community water systems to prepare and distribute an annual consumer confidence report on drinking water. The SDWA Amendments of 1996 require the EPA to publish regulations that establish requirements for consumer confidence reports by August 1998. (See paragraph

- 16102.) When these regulations are published, Marine Corps installations should obtain copies of the regulations from their respective EPA regional office to determine what requirements for producing consumer confidence reports will apply to Marine Corps-owned or -operated public water systems.
- (5) Section 1415 specifies the conditions under which variances from the NPDWR may be granted to public water systems.
- (6) Section 1416 specifies the conditions under which exemptions from the NPDWR may be granted to public water systems.
- (7) Section 1417 requires the use of lead-free pipe, solder, or flux in the installation or repair of any public water system or plumbing in residential or nonresidential facilities providing water for human consumption. Solders and fluxes are considered to be lead-free if they contain less than 0.2 percent lead; pipes and fittings are considered to be lead-free if they contain less than 8.0 percent lead. This section also requires each public water system to provide notice to persons who may be affected by lead contamination when it is discovered in the system.
- (8) Section 1421 requires the EPA to publish regulations for State UIC programs.
- (9) Section 1422 delegates the primary responsibility to enforce program requirement compliance to states which have approved UIC programs.
- (10) Section 1423 provides the EPA with enforcement responsibilities when a state with an approved UIC program has not taken appropriate enforcement action against any person found to be violating the program requirements.
- (11) Section 1427 establishes procedures for developing, implementing, and assessing demonstration programs that are designed to protect critical aquifer protection areas located within areas designated as sole or principal source aquifers.
- (12) Section 1428 requires states to develop programs to establish WHP areas. Section 1428(h) requires all Federal agencies having jurisdiction over any potential source of contaminants identified by a state WHP program to comply with all requirements of the state and local programs the same "as any other person, including payment of reasonable charges and fees."

- (13) Section 1431 provides the EPA Administrator with emergency powers to protect the health of persons endangered by a contaminant that is present in, or likely to enter, a public water system or an underground drinking water source.
- (14) Section 1432 provides for civil penalties of up to \$50,000 and/or up to 5 years imprisonment for any person who tampers with a public water system. Any person who threatens or attempts to tamper with a public water system may be fined up to \$20,000 and/or imprisonment for up to 3 years.
- (15) Section 1445 establishes monitoring, recordkeeping, public notification, site inspection, and reporting requirements for suppliers of water and persons subject to the NPDWR or the UIC program.
- (16) Section 1447 contains a clear waiver of sovereign immunity. Each Federal agency with jurisdiction over a public water system or engaging in any activity which results, or may result, in underground injection that endangers drinking water must comply with applicable Federal, state, or local requirements, whether substantive or procedural, "in the same manner, and to the same extent, as any other person or any non-Governmental entity." The EPA has the authority to waive compliance with this requirement upon the request of the Secretary of Defense and after determination by the President that such a waiver is necessary in the interest of national security. The EPA can also impose administrative penalties of up to \$25,000 per violation per day (also see paragraph 16102).
- (17) Section 1449 provides for citizen suits against any person, including Federal agencies, alleged to be in violation of any requirement prescribed by the SDWA. Citizens can also sue under section 1447 to require that Federal agencies pay delinquent penalties within 18 months after the final order became effective.

2. Energy Policy Act (EPACT) of 1992 (Public Law 102-486).

- a. This Act amended and updated the Energy Policy and Conservation Act and the National Energy Conservation Policy Act. The statements of purpose were revised to include a policy on water conservation.
 - b. Important statutory requirements of EPACT follow:

- (1) Section 123 added section 325(j) to the Energy Policy and Conservation Act. This section establishes maximum water use standards for plumbing fixtures manufactured after January 1, 1994. The maximum water usage rates are 2.5 gallons per minute for showerheads and faucets, 1.0 gallon per flush for urinals, and 1.6 or 3.5 gallons per flush for toilets, depending upon the particular type.
- (2) Section 152 amended section 543 of the National Energy Conservation Policy Act by establishing energy and water conservation requirements for Federal agencies. No later than January 1, 2005, each agency must, to the maximum extent practicable, install in Federal buildings owned by the United States all energy and water conservation measures with payback periods of less than 10 years.
- (3) Section 152 also amended section 546 of the National Energy Conservation Policy Act by authorizing Federal agencies to participate in programs established for water conservation. It also encourages Federal agencies to enter into negotiations with water utilities to design cost-effective water demand management and conservation incentive programs to address the unique needs of facilities used by these process.

16104. REQUIREMENTS

General

a. <u>Statutory Requirements</u>. The SDWA requires compliance by Federal installations and activities to comply with all Federal, state, or local requirements, whether substantive or procedural, applicable to a public water system or any activity which results, or may result, in underground injection that endangers drinking water supplies.

b. Regulatory Requirements

- (1) Applicable requirements include Federal, state, interstate, and local regulations. The remainder of this section summarizes many of the significant Federal regulations pertaining to providing safe drinking water.
- (2) Authorized EPA, state, or other regulatory officials who have presented proper credentials must be allowed to enter Marine Corps facilities at reasonable times to examine or copy records, inspect facilities and monitoring equipment, and sample

any raw or drinking water which the activity is required to monitor. Designated representatives of the CG/CO should accompany the officials during these site visits.

c. Executive Order (EO) Requirements. EO 12088, October 13, 1978, Federal Compliance with Pollution Control Standards, requires executive agencies, including the military departments, to comply with applicable requirements of Federal laws.

d. DoD Requirements

- (1) Environmental Compliance. See chapter 4 of this Manual for information on policy, responsibility, and procedures for achieving compliance with applicable EO's, and Federal, state, interstate, and regional statutory and regulatory environmental requirements. DoD has established the Department of the Air Force as the DoD Executive Agent for implementation of the SDWA.
- (2) <u>Safe Drinking Water</u>. DoD policy requires installations to comply with all applicable requirements of the SDWA and its implementing regulations.

NPDWR

- a. <u>Regulatory Citation</u>. 40 CFR 141 contains the NPDWR. The EPA regulations for implementation and enforcement of the NPDWR are contained within 40 CFR 142.
- b. <u>Applicability</u>. A Marine Corps installation must comply with the NPDWR if it or its designated contractor operates a public water supply system that meets all of the following criteria:
 - (1) Supplies water intended for human consumption;
- (2) Is a community system or a nontransient, noncommunity system. A community water system is defined in the SDWA Amendments of 1996 as a public water system that serves at least 15 service connections used by year-round residents of the area served by the system or regularly serves at least 25 year-round residents;
- (3) Operates drinking water collection and treatment facilities and does not consist solely of distribution and storage facilities;

- (4) Treats some or all of its own drinking water (e.g., chlorinates or fluoridates water purchased from another public water system); and
- (5) Sells water from its system to tenant or commercial activities.
- c. MCL's. The EPA developed MCL's as enforceable health standards. Subparts B and G of the NPDWR specify MCL's and best available technology (BAT) treatment techniques for six categories of contaminants (see paragraph 16102 for new criteria for EPA to promulgate MCL's):
 - (1) Inorganic chemicals.
 - (2) Organic chemicals.
 - (3) Turbidity.
 - (4) Microbiological contaminants.
 - (5) Natural radioactivity.
 - {6} Manmade radionuclides.

d. Monitoring and Analytical Requirements

- (1) For all contaminants identified in paragraph 16104.2c above, subpart C of the NPDWR specifies requirements for sampling locations, frequencies for routine and repeat monitoring, and analytical methodologies.
- (2) Marine Corps-owned and -operated public water systems must conduct drinking water monitoring and analyses at such frequencies and for such contaminants as required by these or the corresponding state regulations, as appropriate.

e. <u>Reporting, Public Notification</u>, and <u>Recordkeeping</u> <u>Requirements</u>

- (1) Subpart D of the NPDWR specifies requirements for reporting, public notification, and recordkeeping requirements. Public notification to persons served by the water system must be provided as follows:
- (a) Public notification for non-acute violations must provide notice by publication in a daily newspaper in the area

served as soon as possible but no less than 14 days after the violation and must provide notice by mail or hand delivering not later than 45 days after the violation or failure;

- (b) Public notification for acute violations must be provided by radio or television as soon as possible, but no later than 72 hours after the violation; and
- (c) See paragraph 16102 for the SDWA Amendment of 1996 requirements for public notice and consumer reports.
- (2) Marine Corps-owned and -operated public water systems must report to the state the results of any test measurement or analysis required for compliance within the shorter of the following time frames:
- (a) The first 10 days following the month in which the result is received, or
- (b) Within the first 10 days following the end of the required monitoring period as stipulated by the state.
- (3) An installation operating a public water system must report to the state within 48 hours the failure to comply with any national primary drinking water regulation, including failure to comply with sampling and monitoring requirements. The installation must also notify the CMC (LF) by message of such noncompliance.
- (4) Public notification requirements must be met when MCL's, treatment techniques, or variance and exemption schedules are violated. The timing, means, and wording for all notifications must be conducted as prescribed in 40 CFR 141, subpart D, or the corresponding state regulations, as appropriate. A representative copy of each type of notice distributed must be provided to the state.
- (5) Marine Corps-owned and -operated public water systems must maintain the following records:
- (a) Bacteriological analysis records for no less than5 years;
- (b) Chemical analysis records for no less than 10 years;

- (c) Records of actions taken to correct NPDWR violations for no less than 3 years after the last action taken in respect to the violation involved;
- (d) Records of sanitary survey reports, summaries, or related correspondence for no less than 10 years after the survey was completed;
- (e) Records concerning a variance or exemption granted to the system for no less than 5 years following expiration of the variance or exemption; and
- (f) Marine Corps installations must provide copies of required records to the EPA or state if requested.
- (6) RCS DD-5090-06 has been assigned for reporting and recordkeeping requirements under the SDWA.
- f. <u>Special Regulations on Monitoring</u>. Subpart E of the NPDWR specifies special monitoring requirements for organic chemicals (40 CFR 141.40), sodium (40 CFR 141.41), and corrosivity characteristics (40 CFR 141.42).

g. Prohibition on Use of Lead Pipes, Solder, and Flux

- (1) Subpart E of the NPDWR (40 CFR 141.43) also prohibits the use of lead pipe, solder, or flux in the installation or repair of any public water system or any plumbing in residential or nonresidential facilities providing water for human consumption.
- (2) Solders and fluxes are considered to be lead-free if they contain less than 0.2 percent lead; pipes and fittings are considered to be lead-free if they contain less than 8.0 percent lead.
- h. <u>MCLG's</u>. Subpart F of the NPDWR specifies MCLG's for organic chemicals, inorganic contaminants, and microbiological contaminants. Maximum contaminant level goals are non-enforceable health goals.

i. Filtration and Disinfection Requirements

(1) Subpart H of the NPDWR specifies filtration and disinfection requirements for public water systems which are supplied by surface water or by a groundwater source under the direct influence of surface water. This subpart establishes

conventional filtration treatment technique requirements in lieu of MCL's for turbidity, heterotrophic place count (HPC) bacteria, viruses, <u>Giardia lamblia</u>, and <u>Legionella</u>. It provides a series of criteria for avoiding filtration and a list of filtration techniques. As noted in paragraph 16102, the EPA may promulgate further rules for disinfectants and disinfectant byproducts.

- (2) The 40 CFR 141.72 contains disinfection requirements for public water systems that do and do not provide filtration.
- (3) To demonstrate compliance with these requirements, a state-approved laboratory must conduct measurements for pH, temperature, turbidity, and residual disinfectant. A laboratory certified by the state to perform such analyses must conduct measurements for total coliforms, fecal coliforms, and HPC. The 40 CFR 141.74(a) specifies methods for these measurements.
- (4) The 40 CFR 141.74(b) and (c) contain monitoring requirements for public water systems that do and do not provide filtration.
- (5) The 40 CFR 141.75 specifies reporting and recordkeeping requirements for public water systems that use a surface water source or a groundwater source under the influence of surface water. Unless the state specifies alternate requirements, these systems must report the specified information to the state on a monthly basis.

j. Control of Lead and Copper

- (1) Subpart I of the NPDWR specifies regulations for lead and copper. This subpart establishes treatment techniques that include requirements for corrosion control treatment, source water treatment, lead service line replacement, and public education. These requirements are triggered, in some cases, by lead and copper action levels measured in samples collected at consumers' taps.
- (2) The lead action level is exceeded if the concentration of lead in more than 10 percent of tap water samples collected during any monitoring period is greater than 0.015 milligram per liter (mg/L).
- (3) The copper action level is exceeded if the concentration of copper in more than 10 percent of tap water samples collected during any monitoring period is greater than 1.3 mg/L.

- (4) The 40 CFR 141.80(c)(3) specifies procedures for calculating the ninetieth (90th) percentile lead and copper levels.
- (5) The 40 CFR 141.86 specifies monitoring requirements for lead and copper in tap water. The 40 CFR 141.87 and 40 CFR 141.88, respectively, provide monitoring requirements for other water quality parameters and for lead and copper in source water when lead and copper action levels are exceeded.
- (6) The 40 CFR 141.89 specifies analytical methods for lead, copper, pH, conductivity, calcium, alkalinity, orthophosphate, silica, and temperature to identify optimal corrosion control for the system.
- (7) The 40 CFR 141.90 contains extensive reporting requirements for complying with the lead and copper NPDWR. These requirements relate to reporting to the state the following information: results of tap water monitoring for lead and copper and for related water quality parameters; results of source water monitoring; actions taken regarding corrosion control treatment, source water treatment, and lead service line replacement; and the public education program.
- (8) Marine Corps-owned and -operated public water systems in the United States subject to the lead and copper control requirements must retain original records of all sampling data and analyses, reports, surveys, letters, evaluations, schedules, state determinations, and any other information required in 40 CFR 141.81 through 40 CFR 141.88. These records must be retained for at least 12 years.

k. <u>Use of Noncentralized Treatment Devices</u>

- (1) Subpart J of the NPDWR specifies the criteria and procedures with which public water systems must comply before they can use point-of-entry treatment devices to achieve compliance with any MCL.
- (2) The 40 CFR 141.101 prohibits public water systems from using bottled water or point-of-use devices to achieve compliance with any MCL. They may be used only on a temporary basis to avoid an unreasonable risk to human health.
- 1. <u>Treatment Techniques</u>. Subpart K of the NPDWR specifies treatment techniques for acrylamide and epichlorohydrin if these compounds are used in the public water system.

m. <u>Information Collection Requirements (ICR) for Public</u>
<u>Water Systems</u>. Subpart M of the NPDWR contains the general requirements, applicability, and schedule for this ICR. Subpart M requires public water systems with a treatment plant that services 50,000 persons or more to conduct disinfection byproduct and related monitoring, microbial monitoring, and disinfection byproduct precursor removal studies.

3. NSDWR

- a. Regulatory Citation. The 40 CFR 143 contains the NSDWR. These regulations establish secondary MCL's for 15 contaminants that may affect the taste, odor, or appearance of drinking water delivered to the users of a public water system, as well as specific requirements for monitoring.
- b. <u>Applicability</u>. These regulations are not Federally enforceable but are intended as guidelines for the states to promulgate their own regulations. Each Marine Corps installation should contact its state to determine whether the state has enforceable secondary MCL's.
- c. <u>Secondary Maximum Contaminant Limits</u>. The 40 CFR 143.3 identifies the secondary MCL's. The contaminants for which secondary MCL's exist are aluminum, chloride, color, copper, corrosivity, fluoride (for which a primary MCL also exists at 40 CFR 141.11(c)), foaming agents, iron, manganese, odor, pH, silver, sulfate, total dissolved solids, and zinc.

d. Monitoring

- (1) For all contaminants identified in paragraph 16104 above, 40 CFR 143.4 recommends that monitoring be conducted at intervals no less frequent than those listed for inorganic chemical contaminants in the NPDWR at 40 CFR 141.23.
- (2) The 40 CFR 143.4 lists the recommended analytical methodologies for determining compliance with the secondary MCL's.
- (3) Marine Corps-owned and -operated public water systems in the United States must conduct drinking water monitoring at such frequencies and for such secondary contaminants as the corresponding state regulations require.
- e. <u>Public Notification Requirements for Fluoride</u>. A community water system which exceeds the secondary MCL for

fluoride (2.0 mg/L), but which complies with the primary MCL (4.0 mg/L) must provide the public notice described in 40 CFR 143.5(b) annually to all customers and to the state.

4. Operation and Maintenance of Potable Water Supply Distribution Systems

- a. <u>Compliance Requirements</u>. Marine Corps public water systems must be operated and maintained to meet the requirements of applicable Federal, state, local, and DON regulations. Overseas bases must comply with the Overseas Environmental Baseline Guidance Document (OEBGD) or the Final Governing Standards (FGS)/Japan Environmental Governing Standards as applicable.
- b. <u>Disinfection Requirements</u>. After water mains, wells, and storage tanks are constructed or repaired, disinfection procedures must be followed before these systems are placed in service. If water supplies will be interrupted for a long period of time, temporary and/or mobile supplies of potable water must be delivered in compliance with NAVMED P5010.

c. Cross-Connection Control

- (1) Marine Corps installations which operate public water systems in the United States must comply with state requirements for establishing, operating, and maintaining a cross-connection control program. Most state cross-connection control regulations require annual inspection and the testing of backflow prevention devices by certified plumbers to ensure that the backflow prevention devices work properly.
- (2) All Marine Corps installations which operate and maintain distribution systems will develop and implement a cross-connection and backflow prevention program that identifies cross-connection hazards, corrects identified deficiencies, provides annual testing and maintenance of backflow prevention devices, incorporates cross-connection general awareness training, and ensures that appropriate backflow prevention devices are included in all new construction or major rehabilitation projects.
- (3) Potable water lines and all nonpotable sources of water must have air gap separation. Interconnections between non-potable sources that cannot be eliminated or protected by an air gap must have backflow prevention devices. Reduced pressure-type backflow preventers must be used when the

possibility of a health hazard could arise from a backflow condition.

Water Conservation Program

- a. <u>Legal Requirements</u>. As amended by EPACT, section 543 of the National Energy Conservation Policy Act establishes water conservation requirements for Federal agencies. No later than January 1, 2005, each agency must install in Government-owned buildings all water conservation measures with payback periods of less than 10 years. Consequently, Marine Corps installations must include these measures in the designs of all quarters and building military construction, repair, and rehabilitation projects. This requirement applies to Marine Corps installations in foreign countries. As noted in paragraph 16102, the EPA must publish guidelines by August 6, 1998, for water conservation plans for small, medium, and large water systems.
- b. Plumbing Fixture Requirements. New showerheads, faucets, urinals, and water closets installed in Marine Corps buildings should have maximum water usage rates of 2.5 gallons per minute (gal/min) for showerheads and faucets, 1.0 gallons per flush for urinals, and 1.6 or 3.5 gal per flush for toilets, depending upon the particular type.
- c. <u>Commercial Utility Conservation Programs</u>. As amended by PACT, section 546 of the National Energy Conservation Policy Act authorizes Federal agencies to participate in programs established for water conservation. It also encourages Federal agencies to negotiate with water utilities to design cost-effective water demand management and conservation incentive programs for Federal facilities. Installations and activities which purchase water from municipal, regional, or commercial utilities should discuss with these utilities opportunities for participation in water conservation and water demand management programs.

UIC Program

a. Regulatory Citation. The 40 CFR 144 contains the EPA regulations for the UIC permit program. The 40 CFR 145 contains the EPA regulations on approving, revising, and withdrawing state UIC programs. 40 CFR 146 specifies the EPA technical criteria and standards for the UIC program. The 40 CFR 147 contains the EPA-approved state UIC program regulations. The 40 CFR 148 provides EPA regulations on hazardous waste (HW) disposal restrictions for class I wells.

- b. <u>Well Classifications</u>. The 40 CFR 146 classifies injection wells as follows:
- (1) Class I wells include those used by generators of HW or owners/operators of HW management facilities to inject HW and those used by cities and industries to inject fluids beneath the lowermost aquifer containing an underground source of drinking water, within 1/4 mile of the well bore.
- (2) Class II wells are used for residual fluids from oil and gas production, such as the injection of brine or fresh water to enhance the recovery of oil or natural gas.
- (3) Class III wells are used for extracting minerals such as sulfur, potash, and salts.
- (4) Class IV wells are used to dispose of hazardous and radioactive waste; new class IV wells are prohibited, and the existing wells must be phased out.
- (5) Class V wells are all other injection wells not included in classes I-IV. Examples include certain septic system wells and cesspools, storm drainage wells, dry wells used for waste disposal, and heat pump wells used to circulate groundwater for heating office buildings. Class V wells are the types most commonly found aboard Marine Corps installations.

c. Prohibitions

- (1) The 40 CFR 144.11 prohibits any underground injection of fluids, except as authorized by permit or rule issued under the UIC program.
- (2) The 40 CFR 144.12 states that no owner or operator may construct, operate, maintain, convert, plug, abandon, or conduct any injection activity in a manner that allows the movement of fluid containing any contaminant into underground sources of drinking water, if the presence of that contaminant may cause a violation of any NPDWR or adversely affect human health.

d. Authorization of Underground Injection

(1) The 40 CFR 144.21 authorizes underground injection into class I, II (except for existing enhanced recovery and hydrocarbon storage wells), and III wells.

- (2) The 40 CFR 144.24 authorizes underground injection into class V wells. Note that 40 CFR 144.26 prohibits injection into class V wells if an owner/operator has not submitted class V inventory information in a timely manner.
- (3) The 40 CFR 144.25 and the regulations of EPA-approved state UIC programs specify conditions under which the EPA or state may require a permit for the operation of any class I, II, III, and V wells.
- (4) The 40 CFR 144, subpart D, contains the requirements for obtaining and complying with a UIC permit.
- (5) The 40 CFR 144, subpart E, contains conditions applicable to UIC permits.
- (6) Marine Corps installations in the United States that own underground injection wells must obtain permits or meet rule requirements before using a well. The disposal of waste from any of the following operations to a well requires authorization by the EPA or a state agency, depending upon which has primary enforcement responsibilities for the UIC program:
 - (a) Domestic sewage disposal;
- (b) Industrial waste, pesticides, or spent cooling water disposal; and/or
 - (c) Stormwater drainage.
- e. <u>Criteria and Standards for the UIC Program</u>. The 40 CFR 146 specifies the EPA criteria and standards applicable to each class of well. These rules include requirements for well construction operating, monitoring, and reporting.

7. Sole Source Aquifer Program

- a. <u>Regulatory Citation</u>. The EPA regulations in 40 CFR 149 provide the criteria for identifying and designating critical aquifer protection areas. They do not apply to Marine Corps bases in foreign countries.
- b. <u>Federal Project Review Requirements</u>. All Federal projects proposed for a designated sole source aquifer area are subject to review by the EPA to ensure that these projects are designed and constructed such that they do not result in, or

contribute to, conditions which would create a significant hazard to public health.

c. <u>Reference</u>. The EPA Office of Ground Water and Drinking Water maintains a fact sheet entitled "Designated Sole Source Aquifers - Nationally." To obtain this fact sheet, contact the EPA Office of Water at (202) 260-2305.

8. WHP Program

a. <u>Legal Requirements</u>

- (1) Section 1428 of the SDWA requires states to develop programs to establish WHP areas. Each state program must be approved by the EPA. Installations should contact their respective state health department or environmental regulatory agency or the appropriate EPA regional office to determine if the EPA has approved their state WHP program. The state may require an installation to develop its own WHP area to safeguard its groundwater supply. At present, the EPA has not promulgated Federal regulations for this program.
- (2) Section 1428(h) of the SDWA requires all Federal agencies having jurisdiction over any potential source of contaminants identified by a state WHP program to comply with all requirements of the state and local programs. States may require installations which operate groundwater-supplied drinking water systems to develop and implement their own WHP programs.
- b. <u>Program Goal</u>. The goal of the WHP program is to protect groundwater supplies used for a drinking water source by controlling potential sources of contamination. The WHP program may be used as a basis for the Source Water Protection Program established by the SDWA Amendments of 1996 (see paragraph 16102).
- c. <u>Program Development</u>. Implementing a WHP program involves five steps:
- (1) Assembling a community planning team with technical experts in hydrogeology, environmental engineering, and land planning;
- (2) Defining and mapping the land area to be included within the WHP area;
- (3) Identifying and locating potential contaminant sources;

- (4) Establishing regulatory and non-regulatory controls to manage activities with the potential to contaminate the groundwater source within the WHP area; and
 - (5) Planning for the future.

d. <u>References</u>

- (1) The EPA Seminar Publication entitled Wellhead Protection: A Guide for Small Communities (EPA/625/R-93/002) provides in-depth information for conducting the five steps of developing a WHP program as outlined above.
- (2) The EPA Handbook on Ground Water and Wellhead Protection (EPA/625/R-94/001) provides excellent information for delineating a WHP area. The handbook includes procedures for preparing potentiometric maps, measuring and estimating aquifer parameters for developing flow equations, delineating WHP areas, using computer models, conducting an inventory of potential contaminant sources, assessing risks, and managing the WHP program.

16105. TERMS AND DEFINITIONS.

- 1. Action Level. The concentration of lead or copper in water specified in 40 CFR 141.80(c) which determines, in some cases, the treatment requirements that a water system must meet to control lead and copper (40 CFR 141).
- 2. Aguifer. A geological formation, group of formations, or part of a formation that is capable of yielding a significant amount of water to a well or spring (40 CFR 149).
- 3. <u>BAT</u>. The best technology, treatment techniques, or other means which the EPA Administrator finds are available after examination for efficacy under field conditions and not solely under laboratory conditions (40 CFR 141).
- 4. <u>Community Water System</u>. A public water system which serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents (40 CFR 141).
- 5. <u>Compliance Period</u>. A 3-year calendar period within a 9-year compliance cycle. Each compliance cycle has three 3-year compliance periods. Within the first compliance cycle, the first compliance period was January 1, 1993, through December 31, 1995;

the second period is January 1, 1996, through December 31, 1998; and the third period will be January 1, 1999, through December 31, 2001 (40 CFR 141).

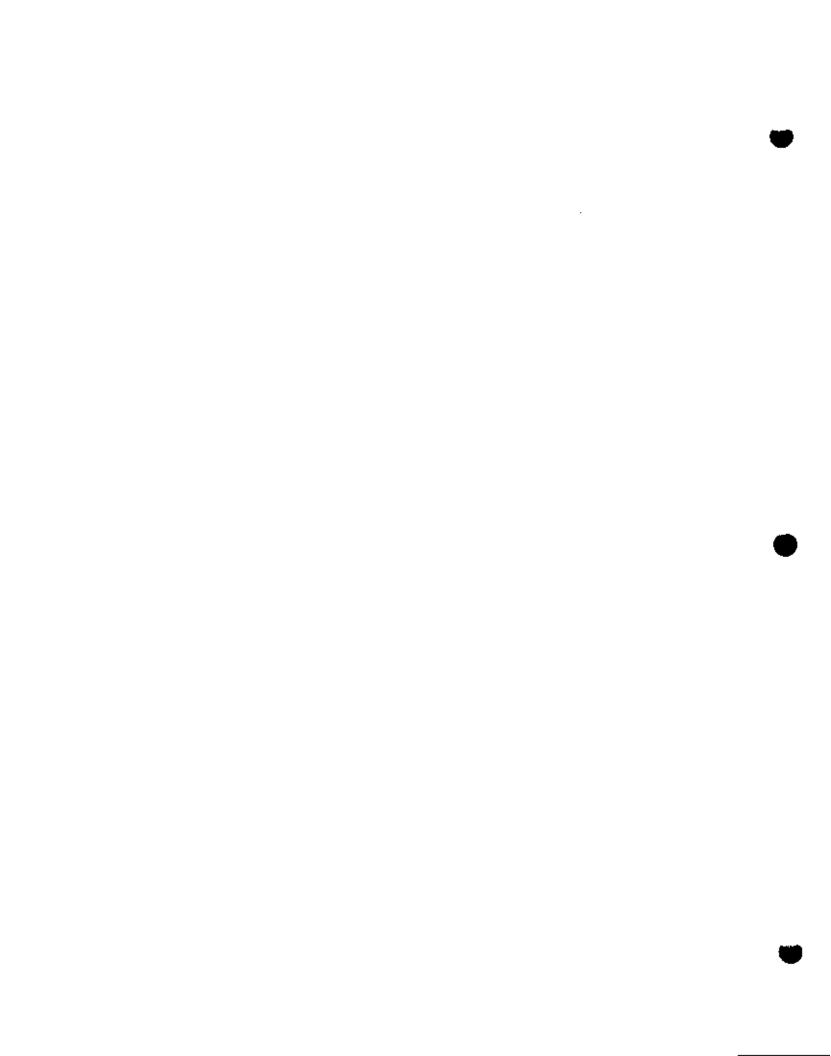
- 6. <u>Contaminant</u>. Any physical, chemical, biological, cr radiological substance or matter in water (40 CFR 141).
- 7. <u>Conventional Filtration Treatment</u>. A series of processes including coagulation, flocculation, sedimentation, and filtration resulting in substantial particulate removal (40 CFR 141).
- 8. <u>Corrosion Inhibitor</u>. A substance capable of reducing the corrosivity of water toward metal plumbing materials, especially lead and copper, by forming a protective film on the interior surface of those materials (40 CFR 141).
- 9. <u>Disinfectant</u>. Any oxidant, including but not limited to chlorine, chlorine dioxide, chloramines, and ozone added to water in any part of the treatment or distribution process, that is intended to kill or inactivate pathogenic microorganisms (40 CFR 141).
- 10. <u>Fluid</u>. Any material or substance which flows or moves, whether as a semisolid, liquid, sludge, gas, or in any other form or state (40 CFR 144).
- 11. <u>Generator</u>. Any person, by site location, whose act or process produces HW identified or listed in 40 CFR 261 (40 CFR 144).
- 12. <u>Groundwater</u>. Water below the land surface in a zone of saturation (40 CFR 144).
- 13. <u>Groundwater Under the Influence of Surface Water</u>. Any water beneath the surface of the ground with:
- a. Significant occurrence of insects or other macroorganisms, algae, or large diameter pathogens such as Giardia lamblia (40 CFR 141); or
- b. Significant and rapid shifts in water characteristics such as turbidity, temperature, conductivity, or pH which closely correlate to climatological or surface water conditions (40 CFR 141).

- 14. <u>Injection Well</u>. A well into which fluids are injected (40 CFR 144).
- 15. <u>Lead Service Line</u>. A service line made of lead which connects the water main to the building inlet and any lead pigtail, gooseneck, or other fitting which is connected to such lead line (40 CFR 141).
- 16. MCL. The maximum permissible level of a contaminant in water which is delivered to the free-flowing outlet of the ultimate user, except in cases where the maximum permissible level is measured at the point of entry to the distribution system (40 CFR 141).
- 17. MCLG. The maximum level of a contaminant in drinking water at which no known or anticipated adverse effect on the health of persons would occur, and which allows an adequate margin of safety. Maximum contaminant level goals are nonenforceable health goals (40 CFR 141).
- 18. <u>Noncommunity Water System</u>. A public water system that is not a community water system (40 CFR 141).
- 19. <u>Nontransient, Noncommunity Water System</u>. A public water system that is not a community water system and that regularly serves at least 25 of the same persons for over 6 months per year (40 CFR 141).
- 20. Owner or Operator. The owner or operator of any activity or facility subject to regulation under the UIC program (40 CFR 144).
- 21. <u>Permit</u>. An authorization, license, or equivalent control document issued by the EPA or an approved state to implement the requirements of the UIC program. The permit includes "area" permit and "emergency" permit, but does not include UIC authorization by rule or any permit which has not yet been the subject of final agency action, such as a draft permit (40 CFR 144).
- 22. <u>Person</u>. An individual, corporation, company, association, partnership, municipality, or state. Federal, or tribal agency (40 CFR 141).
- 23. <u>Point-of-Entry Treatment Device</u>. A treatment device applied to the drinking water entering a house or building for the

purpose of reducing contaminants in the drinking water distributed throughout the house or building (40 CFR 141).

- 24. <u>Point-of-Use Treatment Device</u>. A treatment device applied to a single tap used for the purpose of reducing dontaminants in drinking water at that one tap (40 CFR 141).
- 25. <u>Potable Water</u>. Water that has been examined and treated to meet the proper standards and declared by responsible authorities to be fit for drinking.
- 26. Public Water System. A system for the provision of piped water for human consumption, if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year. This term includes:
- a. Any collection, treatment, storage, and distribution facilities (TSDF) under control of the operator of such system and used primarily in connection with such system (40 CFR 141); and
- b. Any collection or pretreatment storage facilities not under such control which are used primarily in connection with such system (40 CFR 141).
- 27. Recharge Area. An area in which water reaches the zone of saturation by surface infiltration (40 CFR 149).
- 28. <u>Supplier of Water</u>. Any person who owns or operates a public water system (40 CFR 141).
- 29. <u>Surface Water</u>. All water which is open to the atmosphere and subject to surface runoff (40 CFR 141).
- 30. <u>UIC</u>. The regulation of the injection of fluids into the subsurface through a well to protect groundwater for potential use as drinking water (40 CFR 144).
- 31. Well. A bored, drilled, or driven shaft, or a dug hole, whose depth is greater than the largest surface dimension (40 CFR 144).
- 32. <u>WHP Area</u>. The surface and subsurface area surrounding a water well or well field supplying a public water system through which contaminants are reasonably likely to move and to reach such water well or well field (SDWA, section 1428(e)).

33. Year Round Resident. For purposes of applicability to Marine Corps installations, a year round resident is defined as an installation resident or year-round employee who is regularly served (8 or more hours daily) by the water system. State definitions will apply in cases where the definitions differ.



CHAPTER 16

DRINKING WATER SYSTEMS AND WATER CONSERVATION

SECTION 2: MARINE CORPS POLICY

16200, GENERAL

- 1. Marine Corps installations in the United States will comply with all applicable substantive and procedural drinking water regulations established by the EPA or those states that have been granted primary enforcement responsibility.
- 2. Marine Corps installations located within foreign countries will comply with the applicable FGS or OEBGD if no FGS has been published.

16201. DRINKING WATER PROGRAM

- 1. Marine Corps policy is to provide personnel who reside or work on its installations with the highest quality drinking water possible.
- The use of a regional or municipal public water supply will be the preferred drinking water supply method whenever an analysis of life-cycle costs and environmental impacts indicates that the use of a such a supply is as or more economical and environmentally beneficial than constructing, upgrading, and operating a water collection and treatment facility. Economic components used in the analysis should include any capital cost contributions to the municipality for a prorated share of system capacity; continuing user fees and surcharges; treatment costs; and Marine Corps facility capital, operation, and maintenance costs (including expenses for permit fees, monitoring, utilities, equipment repair and replacement, solids handling and disposal, chemical usage, and personnel staffing, training, and certification). For more information, see NAVFAC P-443. environmental analysis should include surface water and groundwater quality and quantity issues; threatened and endangered species impacts; and archaeological, cultural, and natural resources issues.
- 3. The development, expansion, and operation of Marine Corps-owned drinking water collection, treatment, storage, and

distribution facilities are authorized whenever a municipal system or other alternatives are not available or cost-effective.

- 4. Installations that ourchase water from a public water system and distribute it to on-site activities or to any person or entity outside the community may be subject to the NPDWR. Contact the appropriate state agency to determine whether compliance with all or part of the NPDWR is required.
- a. If the installation distributes water to on-site DoD tenant activities; Morale, Welfare, and Recreation activities; and/or commercial businesses and charges those entities only a pro rata share of its water costs and a maintenance surcharge, this practice normally is not considered to be selling water to persons. This situation is analogous to an office or industrial park that charges tenants a pro rata share for utilities services.
- b. If the installation sells water to entities on or off site, the sale renders the activity a "public water supply" subject to monitoring and reporting requirements imposed by the municipality, state, and/or the EPA.
- c. Installations that rech. rinate or fluoridate water purchased from a public water system may be considered to be operating a treatment process and may be required to comply with the NPDWR. To avoid having to comply with all provisions of the NPDWR except with those pertaining to microbiological contaminants, coliform monitoring, and disinfection or fluoride monitoring, the installation should request an exemption from the state.
- d. A Marine Corps installation that purchases water from a public water system subject to SDWA regulations, operates no collection or treatment facilities of its own, and does not sell water to another entity normally is not subject to the NPDWR (40 CFR 141.3).
- 5. Marine Corps water system operators must meet the licensing or certification requirements of the state in which the system is located. Job descriptions for Marine Corps water system operators require a state certification or license or the ability to obtain and maintain a certification or license as a condition of employment at all facilities where state certification requirements apply, as required by the Federal Personnel Manual (Supplement 271-1, chapters 3-4, "License and Credentials").

16201

- 6. Marine Corps laboratories that perform drinking water analyses as required under the NPDWR and NSDWR will be certified under applicable regulations of the Federal, state, or local authority. Appropriate chain-of-custody procedures will be used to track samples collected for analysis. Laboratories will use EPA-approved test procedures contained in 40 CFR 141 and 40 CFR 143 for analyzing drinking water.
- 7. The Bureau of Medicine and Surgery will assist the installation CG/CO in carrying out the responsibilities for complying with the SDWA. The Bureau of Medicine and Surgery also may apply additional standards, as necessary, to any Marine Corps water system. The monitoring of coliform bacteria, chlorine residual, and fluorides by the Naval hospital or clinic's preventive medicine section must be conducted as prescribed by NAVMED P5010.
- 8. Marine Corps installations must establish, implement, and maintain a cross-connection control and backflow prevention program.

16202. WATER CONSERVATION PROGRAM

- 1. Installations must develop a water conservation program with initial emphasis on reducing the use of potable water for Marine Corps industrial processes and irrigation requirements. The priorities of the program must reflect economic feasibility and water conservation needs and the EPA water conservation guidelines to be published.
- 2. The water conservation program must address both short- and long-term measures necessary to optimize potable water usage and decrease the use of potable water for non-potable purposes. Such measures should include:
- a. Conducting leak detection surveys and implementing repair programs. These surveys should target water distribution mains and service connections as well as building plumbing and water fixtures;
- b. Replacing inefficient plumbing fixtures with water conserving showerheads, faucets, urinals, and commodes;
- c. Replacing once-through cooling water applications with recirculating cooling towers;

- d. Installing automatic irrigation control systems which adjust watering rates based on weather conditions and evapotranspiration rates instead of timed cycles;
- e. Irrigating during late evening and early morning hours rather than daylight hours;
- f. Reusing reclaimed wastewater to irrigate parade decks, athletic fields, golf courses, forests and tree lines, garrison and residential landscaping, and outleased areas used for agriculture and silviculture;
- g. Replacing water intensive turf landscaping with native drought-tolerant vegetation; and
- h. Using mulches in landscaping to reduce evaporative water losses.

16203. UNDERGROUND INJECTION CONTROL (UIC) PROGRAM

- 1. Marine Corps installations must not operate or inject fluids into class I, II, III, or IV injection wells.
- 2. Marine Corps installations must not inject fluids into class V injection wells if class V inventory information was not submitted to the appropriate EPA or state agency in a timely manner pursuant to 40 CFR 144.26.
- 3. Marine Corps installations must properly close all class V injection wells which are not essential to mission requirements in order to eliminate potential sources of groundwater contamination and prevent illicit disposal of hazardous substances (HS).

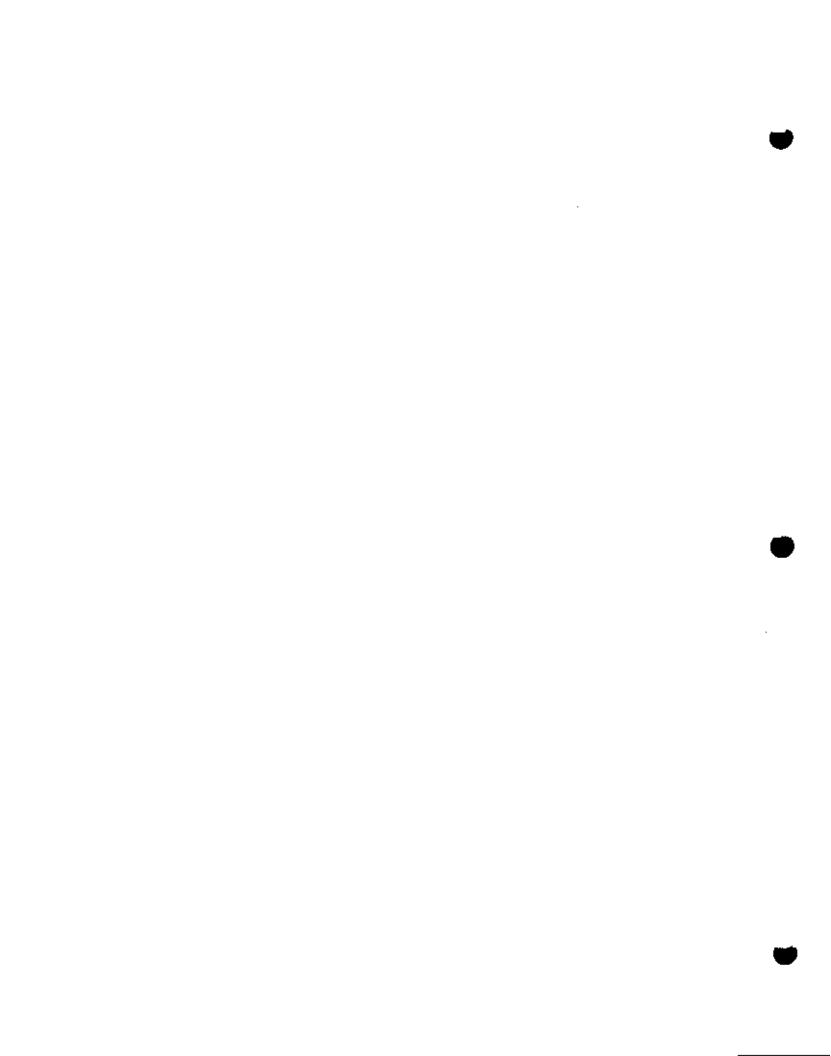
16204. SOLE SOURCE AQUIFER PROGRAM

- 1. Marine Corps installations located within an area where a sole source aquifer has been designated must contact their respective EPA regional office to determine if proposed construction projects or activities which could contaminate an aquifer are subject to review under this program.
- 2. Marine Corps installations must ensure that projects within sole source aquifer areas which are reviewed by the EPA are designed and constructed to meet conditions stipulated under the

EPA approved program. The completed activity must be operated such that it will not result in or contribute to conditions which would create a significant hazard to public health.

16205. WELLHEAD PROTECTION (WHP) PROGRAM

- 1. Marine Corps installations having jurisdiction over any potential source of contaminants identified by a state or local WHP program, or a state source water assessment program, will comply with all applicable requirements.
- 2. If a community adjacent to a Marine Corps installation initiates a WHP program, the CG/CO should request representation on the community planning team to ensure that the installation's interests are considered and protected. The installation should identify and locate potential contaminant sources within its boundaries and provide this information to the team.
- 3. Any Marine Corps installation or activity located within a designated WHP area will comply with all regulatory and nonregulatory controls to manage activities that have the potential to contaminate the groundwater source within that area.



CHAPTER 16

DRINKING WATER SYSTEMS AND WATER CONSERVATION

SECTION 3: RESPONSIBILITIES

16300. <u>CMC (LF)</u>

- 1. Provide information and advice to installation commanders regarding proposed and final rules and regulations pertaining to drinking water systems and water conservation and uniformly apply Marine Corps policy as set forth in this Manual.
- 2. Assist installations in resolving disputes with Federal, state, local, and foreign regulatory agencies as required.
- 3. Conduct special environmental compliance and protection studies with regard to drinking water systems and water conservation management to assist in establishing policy or initiating actions.
- 4. Ensure, through field visits and the Environmental Compliance Evaluation Program, Marine Corps cooperation and compliance with Federal, state, and local regulatory agencies with regard to drinking water systems and water conservation regulations.
- 5. Track Marine Corps progress toward meeting established drinking water quality and water conservation goals.

16301. CHIEF BUREAU OF MEDICINE AND SURGERY (BUMED)

- 1. Revise instructions and other appropriate documents to reflect health concerns and health-related requirements for drinking water systems.
- 2. Provide health-related advice to Marine Corps commanders for carrying out their responsibilities for drinking water quality and the water supply system.

16302. <u>CG/CO OF MARINE CORPS INSTALLATIONS AND COMMANDER MARINE</u> FORCES RESERVE (COMMARFORRES)

- 1. Identify and submit to the CMC (LFL) and the CMC (LFF) project documentation and funding requests for drinking water systems that are required to maintain compliance with applicable existing and emerging regulations and permits. Program and budget for personnel, equipment, materials, training, and monitoring required to comply with drinking water systems and water conservation requirements. Pay appropriate Federal, state, and local fees. Ensure that the environmental management hierarchy is employed, pollution prevention alternatives evaluated, and life-cycle cost impacts assessed, in evaluating and selecting projects that address compliance requirements.
- 2. Ensure that all required Federal, state, and local permits are applied for and obtained. Sign certifications and permit applications, as required, for construction of all drinking water systems and water conservation projects.
- 3. Ensure that a base or station order is written to implement specifications set forth in this chapter. This requirement can be accomplished either by writing an environmental compliance and protection standard operating procedures document to implement all environmental requirements or by writing a separate base order to implement specifications of this chapter alone.
- 4. Identify and submit to the CMC (LF) nonrecurring projects and funding required to bring drinking water systems, potential contamination sources within WHP areas, and underground injection wells into compliance with applicable existing and emerging regulations, requirements, and permits. Program and budget for sufficient personnel, equipment, materials, training, and monitoring resources required to effectively operate, maintain, and repair drinking water systems in compliance with drinking water program requirements. With command counsel concurrence, pay related Federal, state, and local fees.
- 5. Operate and maintain adequate facilities to produce, store, and distribute drinking water in the quantities required in compliance with the NPDWR and applicable state standards, regulations, and requirements.
- 6. Ensure that management programs and controls exist to comply with applicable regulations, NPDWR MCL's and treatment techniques, UIC permit conditions; and monitoring, recordkeeping,

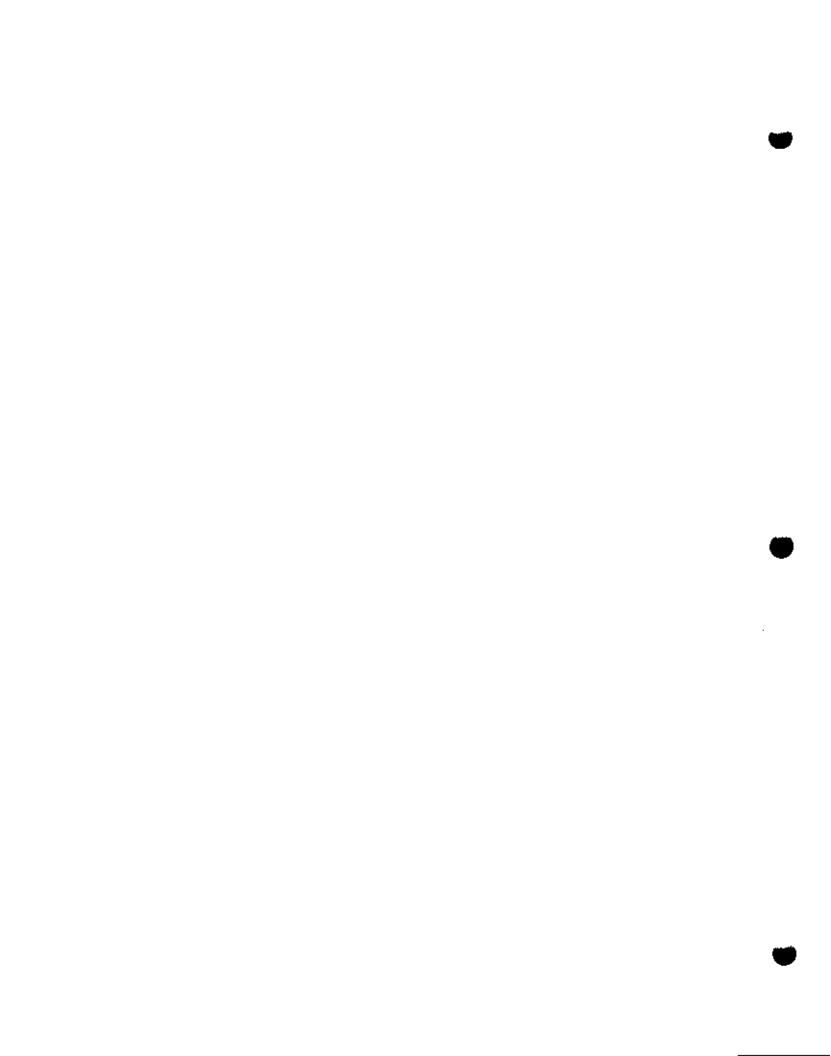
public notification, and reporting requirements for drinking water systems and underground injection wells.

- 7. Ensure compliance with all applicable water system operator certification requirements. Identify training and certification needs for Marine Corps operators of public water systems and allocate needed resources.
- 8. Oversee and provide resources for monitoring, recordkeeping, reporting, public notification practices, and the use of certified laboratories for analyses in compliance with EPA or EPA-approved state requirements. Retain copies of all records, reports, and public notices submitted to the EPA, state, and local water district offices.
- 9. Submit consumer confidence reports.
- 10. Coordinate with appropriate EPA, state, and regional offices the review of all projects for the construction of new or upgraded drinking water system facilities and for the construction, modification, or closure of underground injection wells.
- 11. Implement corrosion control treatment, source water treatment, and/or lead service piping replacement as needed to comply with NPDWR requirements for the control of lead and copper in drinking water.
- 12. Ensure that a cross-connection control and backflow prevention program is developed and implemented. Properly inspect, operate, and maintain backflow prevention devices, altitude and pressure-reducing valves, water meters, water-saving devices, and water reuse and recycle systems.
- 13. Ensure that the installation has applied for and obtained all required Federal and state UIC permits. Comply with UIC requirements under the SDWA. Inventory all class V wells and provide a copy of the inventory to the EPA or state, as appropriate.
- 14. Implement a multifaceted Marine Corps water conservation program. Execute water conservation studies to reduce water usage and generation of wastewater flows. Review the various uses of water at respective activities to ensure that all economically practical water conservation measures are taken.

- 15. Ensure that all water conservation measures with payback periods of less than 10 years, as required by EPACT, are installed in Government-owned buildings by January 1, 2005. Develop a prioritized list of required projects and programs, and provide resources for their implementation.
- 16. Ensure that adequate access to drinking water system collection, TSDF's, and to underground injection wells, is provided to the EPA, state, and local regulatory agencies for the purpose of sampling water and injected wastes, and for the inspection of operations and records.

CHAPTER 17 SOLID WASTE MANAGEMENT AND RESOURCE RECOVERY

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CHAPTER 17

SOLID WASTE MANAGEMENT AND RESOURCE RECOVERY

SECTION 1: INTRODUCTION

- 17100. <u>PURPOSE</u>. This chapter establishes Marine Corps policy and responsibilities for compliance with statutory and procedural requirements for SW disposal, waste minimization, recycling, and resource recovery requirements.
- 17101. APPLICABILITY. See paragraph 1101.
- 17102. <u>BACKGROUND</u>. The Solid Waste Disposal Act (SWDA), as amended by the Resource Conservation and Recovery Act (RCRA), establishes requirements concerning the disposal and management of SW. The following types of facility activities may be subject to RCRA subtitle D, SW rules:
- 1. Thermal processing of 50 tons per day (tpd) or more of municipal-type SW;
- Collecting and storing residential, commercial, and industrial SW;
- Operating land disposal sites or using commercial off-site landfills for SW disposal;
- Selling beverage containers; and
- 5. Purchasing products that contain recycled materials (40 CFR 247).

17103. FEDERAL STATUTES

1. SWDA of 1965, as Amended of 1976 (42 U.S.C. 6901 et seg.). The SWDA, normally now referred to as RCRA, requires that Federal installations comply with all Federal, state, and local requirements concerning the disposal and management of SW. These requirements include permitting, licensing, and reporting. The Act encourages the beneficial reuse of waste through recycling and burning for energy recovery.

2. RCRA of 1976 (42 U.S.C. 6901 et seg.). RCRA defines which SW's are hazardous and sets strict requirements for the handling of hazardous wastes (HW). RCRA bans the disposal of sludge and many liquids at SW disposal facilities. The Act encourages conserving and recycling SW with residual value. Subtitle D of RCRA establishes Federal standards for the management of nonhazardous SW. The primary goals of subtitle D are to encourage environmentally sound SW management practices, the

recycling of waste material, and resource conservation. Subtitle D has mandatory technical standards for nonhazardous SW disposal

- 3. Clean Air Act (CAA) of 1970, as Amended (42 U.S.C. 7401 et seg.). Section 112 of the CAA authorizes the Environmental Protection Agency (EPA) to set emission standards for hazardous air pollutants. In 1973, a standard for the control of asbestos fibers was issued as part of the National Emissions Standards for Hazardous Air Pollutants. Regulations addressing asbestos disposal in SW landfills are included in the CAA, section VI, Special Pollutants.
- 4. Military Construction Codification Act of 1982 (Public Law 97-214). Section 6 of the Military Construction Codification Act contains a provision that allows net proceeds from the sale of recyclable materials to be used by Marine Corps installations having qualified recycling programs (QRP) for certain purposes.
- 5. Federal Property and Administrative Services Act (FPAS) of 1949 (10 U.S.C. 484 et seg.). Section 203 of the FPAS contains provisions on the sale of recyclable materials.
- 6. Pollution Prevention Act (PPA) of 1990 (42 U.S.C. 13101 et seg.). This Act establishes the national policy that "pollution should be prevented at the source whenever feasible. Pollution that cannot be prevented should be recycled in an environmentally safe manner whenever feasible; pollution that cannot be prevented or recycled should be treated in an environmentally safe manner whenever feasible; and disposal or other release into the environment should be employed only as a last resort and should be conducted in an environmentally safe manner."
- 7. Executive Order (EO) 12873, Federal Acquisition, Recycling, and Waste Prevention, October 20, 1993. This EO on Federal Acquisition, Recycling, and Waste Prevention, requires the Federal Government to make more efficient use of natural resources by maximizing recycling and preventing waste wherever

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facilities.

possible, in addition to using and procuring environmentally preferable products and services.

17104. REQUIREMENTS

1. SW Collection, Storage, and Disposal

- a. Federal, state, and local requirements concerning collection, storage, and disposal apply to Marine Corps installations that.
- (1) Generate SW, whether it is collected by the Marine Corps or by a nonmilitary collector.
- (2) Dispose of SW on Marine Corps property, regardless of whether the waste is originated by the Marine Corps or other sources.
- (3) Dispose of SW off Marine Corps property if the waste is generated by a Marine Corps installation and if the installation has direct management control over the disposal operation.
- b. The 40 CFR 240-247 and 40 CFR 257-258 contain applicable Federal regulations for nonhazardous SW. Federal SW requirements have changed dramatically over the last several years, with most changes occurring in the following areas:
- (1) Federal procurement of selected products containing recovered materials and post-consumer wastes, including oil, paper, tires, and building insulation; and
- (2) Requirements for Municipal Solid Waste Landfills (MSWLF) (40 CFR 258).
- c. Marine Corps waste materials (including trash, rubbish, dunnage, garbage, construction debris, and liquid waste) must not be burned in open fires, except in limited situations after considering health and safety issues and with the approval of the appropriate state or local agencies and the EPA regional office.

2. Thermal Processing of SW

a. Federal (40 CFR 240), state, and local requirements are applicable to thermal processing facilities designed to process 50 tpd or more of SW. For practical purposes, these requirements

apply to any facility designed to process, or which actually processes, an average of 2.1 tph or more (40 CFR 240.100).

- b. Emissions must not exceed the existing air quality or emission standards established by the EPA, state, or local agencies. All water discharged from a thermal processing facility must be treated sufficiently to meet applicable effluent limitation standards. All necessary permits must be obtained from the appropriate Federal, state, or local agencies.
- c. Thermal processing residue must be disposed of in an environmentally acceptable manner. Land disposal of residues must be per EPA guidelines for the land disposal of SW's. The guidelines also apply to those nonhazardous wastes which cannot be thermally processed for reasons of health, safety, or technological limitation.
- 3. Marine Corps-Owned Land Disposal Sites. The EPA promulgated requirements for MSWLF's which became effective on October 9, 1993 (40 CFR 258). The regulations address the design, location, construction, operation, closure, and post-closure of MSWLF's as follows:
- a. MSWLF's and lateral expansions that stopped receiving SW on or before October 9, 1991, do not have to meet the requirements.
- b. MSWLF's and lateral expansions that received SW after October 9, 1991, but stopped receiving SW on or before October 9, 1993, only have to meet the final cover requirements specified in 40 CFR 258.60(a). The final cover must have been installed no later than 6 months after receipt of the last wastes.
- c. MSWLF's and lateral expansions that continue to receive wastes after October 9, 1993, must meet all of the requirements. Refer to 40 CFR 258.1(f) for site- and condition-specific exemptions for MSWLF's that continue to receive SW.
- 4. Marine Corps-Owned Land Disposal Sites. The EPA promulgated revisions to existing criteria for SW disposal facilities and practices, for Nonmunicipal Nonhazardous Waste Disposal Units that receive Conditionally Exempt Small Quantity Generator waste, which will become effective on January 1, 1998 (40 CFR 257.7 through 257.13 and 257.30), and July 1, 1998 (40 CFR 257.21 through 257.28). These regulations address location, groundwater monitoring, and corrective action.

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5. <u>SW Resource Recovery</u>

a. General

- (1) The EPA, with the cooperation of other Federal agencies, has surveyed Federal activities to determine SW disposal rates within Standard Metropolitan Statistical Areas (SMSA). The DON has been designated the lead agency in nine SMSA's by the EPA: Charleston-North Charleston, SC; Chicago, IL; Honolulu, HI; Los Angeles-Long Beach, CA; San Diego, CA; San Francisco-Oakland, CA; Norfolk-Virginia Beach Portsmouth, VA/NC; Pensacola, FL; and Philadelphia, PA. Similarly, the United States Army has been designated lead agency in the Baltimore, MD; Colorado Springs, CO; Columbus, GA/AL; and Washington, DC/MD/VA SMSA's. The United States Air Force is the lead agency in the San Antonio, TX, SMSA, and the Department of Transportation (DOT) is the lead agency in the New York, NY/NJ, SMSA's.
- (2) The philosophy underlying resource recovery is that material or energy recovery from waste is possible at a point downstream from the point of generation, and is an alternative to landfilling, incinerating, or otherwise disposing of the waste in a manner harmful to the environment or wasteful of natural resources.
- (3) Generation rates, discussed under resource recovery guidelines, are based on 260 days per year and 100 tpd, equivalent to 26,000 tons per year. The amount of SW is calculated from the volume that remains after implementing the source separation guidelines.
- (4) Marine Corps installations located within SMSA's must participate with the DoD Components and Federal facilities in the establishment and/or utilization of a single resource recovery facility if:
- (a) Any one Federal facility generates 50 tpd or more of SW after complying with waste reduction and source separation policies;
- (b) The combined total of this SW from all Federal installations within an SMSA is 100 tpd or more; and
- (c) Within a qualified SMSA, the Federal agency generating the largest quantity of SW is designated by the EPA as the lead agency and has the responsibility for implementing the guidelines in the SMSA.

- (5) A Marine Corps installation outside a SMSA that generates 100 tpd or more of residential, commercial, and institutional SW after complying with waste reduction and source separation policies must establish and/or use resource recovery facilities to separate and recover materials and/or energy from SW. Installations outside SMSA's must follow these requirements:
- (a) The installation must advise the CMC (LF) if it generates 100 tpd or more of SW.
- (b) Where the SW generation rate is below 100 tpd, installations should consider a resource recovery facility in order to meet state or local laws on SW reductions and/or when it appears to be cost-effective. Special emphasis should be given to cooperating with community resource recovery efforts. Installations generating less than 100 tpd must advise the CMC (LF) if and when participation in a resource recovery facility appears viable.
- b. <u>Recycling Programs: Closed Loop Recycling and ORP's</u>. DoD policy requires all installations and commands to:
 - (1) Establish recycling programs and procedures that:
- (a) Ensure, where cost-effective, that all installations and activities have, or participate in, QRP's, and that these recycling programs are available to serve all host and tenant organizations occupying space on the installation, including leased space.
- (b) Ensure, where cost-effective, that contracts awarded after the effective date of the this instruction that provide for contractor operation of a Government-owned or -leased facility located within the United States, its territories, or possessions include provisions that obligate the contractor to participate in a recycling program. Where cost-effective, existing contracts covering Government-owned/contractor-operated facilities should be modified to incorporate recycling provisions. Participation by contractors operating government-owned or -leased facilities overseas where recycling programs are available is required.
- (c) Ensure that QRP procedures address recyclable materials, excluded materials, and other QRP materials.
- (d) Divert recyclable materials from the nonhazardous SW stream where economically feasible. Individual types of

recyclable materials that make up a substantial percentage of the nonhazardous waste stream should be included in recycling programs, unless doing so will make the overall recycling program unprofitable. Recyclable materials do not require informal screening as defined in DoD 4160.21-M.

- (e) Establish controls that ensure excluded materials, including those listed in 32 CFR 172.2(b)(3), are not sold through a QRP.
- (f) Authorize installation commanders, as appropriate, to sell directly recyclable and other QRP materials or to consign them to the Defense Reutilization and Marketing Service for sale.

1 Installations must implement procedures ensuring that United States trade security control policies are followed in accordance with DoD 4160.21-M prior to directly selling firing range-expended brass or mixed metals gleaned from firing range cleanup that do not require demilitarization and that are Munitions List Items (MLI) or Strategic List Items (SLI). Expended brass must be crushed, shredded, or otherwise destroyed prior to public sale.

2 Reuse Screening. Prior to selling directly other QRP materials, installations must implement procedures for local reuse screening to consider reutilization, transfer, and donation programs in accordance with DoD 4160.21-M.

<u>3</u> Ensure that outside the United States the disposition of recyclable and other QRP materials, derived from goods that have been imported duty-free, is accomplished, consistent with the provisions contained in status of forces, surplus, or excess property agreements or other international agreements with host nations.

(g) Ensure that the distribution of recycling proceeds is consistent with 10 U.S.C. 2577.

1 Sale proceeds will be used first to cover the costs directly attributable to all installation recycling programs, including, but not limited to manpower, facilities, equipment, overhead, and other capital investments. After these costs are recovered, installation commanders may use up to 50 percent of the remaining proceeds for environmental compliance, pollution prevention, composting, alternative fuel vehicle infrastructure support and vehicle conversion, energy

conservation, or occupational safety and health projects, with first consideration given to projects included in the installation's pollution prevention plan. Any remaining proceeds may be transferred to the nonappropriated Morale, Welfare, and Recreation (MWR) account for any approved programs.

2 An accounting and control system must be established for a recycling program that provides detailed management and audit information, tracks material quantity handled, calculates sales and handling costs for recycled material, and tracks expenditures made for appropriate projects and MWR programs. Integrity of the audit trail will be a priority concern.

3 Ensure that appropriate management controls are in place for recyclable materials that may be hazardous, such as lead-acid batteries.

- (2) Operate a composting program or participate in a regional composting program, if it is practicable to do so.
- c. <u>High-Grade Paper</u>. Waste high-grade paper generated at Marine Corps installations must be separated at the source of generation, separately collected, and sold for the purpose of recycling. Exceptions may be made only if analysis by the managing installation determines that a market for recovered products is not available, or that compliance is not economical. In situations where a Marine Corps office facility is a tenant activity, the host activity (or lessor) is responsible for establishing a source separation program. The Marine Corps office facility must encourage the establishment of such programs and cooperate by separating high-grade paper. The Marine Corps installation must consider the specific methods and systems recommended in current requirements (40 CFR 246) for implementing a source separation program.

d. <u>Used Newspaper</u>

(1) Installations should separate used newspapers generated in Marine Corps residential areas at the source of generation, and sell them for recycling. Exceptions are appropriate only if the managing installation determines through analysis that markets are not available or that compliance is not economical. Such analyses must include the applicable portions of the life-cycle costs associated with the operation, maintenance, closure, and post-closure of Marine Corps-owned

landfills, as well as the applicable cost of disposal by contract.

- (2) Extensive news releases to residents for motivation and coordination should precede and accompany the program. Subsequent guidance should indicate the need for the program, the specific collection days, how to prepare bundles for collection, and the use of bulk containers outside multi-family dwellings. Consideration must be given to the specific methods and systems recommended in current requirements for the implementation of newspaper source separation programs.
- e. <u>Corrugated Container Waste</u>. Installations should collect and sell waste-corrugated containers for the purpose of recycling. Exceptions are appropriate only if the managing installation determines through analysis that markets are not available or that compliance is not economical. Such analyses must include the applicable portions of the life-cycle costs associated with the operation, maintenance, closure, and post-closure of Marine Corps-owned landfills and the applicable cost of disposal by contract.
- f. Resource Recovery Facilities. Marine Corps installations with resource recovery programs must follow requirements outlined in 40 CFR 243 and 245.
- (1) Marine Corps installations that dispose of, or are responsible for, the disposal of residential, commercial, or institutional SW in amounts of 100 tpd or more (equivalent to 26,000 tons or more annually), after the implementation of source separation and other waste reduction procedures, must establish and/or use resource recovery facilities to separate and recover materials and/or energy from such SW. Such resource recovery facilities may be owned by the Marine Corps, Federal agencies, or local/regional governmental or commercial interests.
- (2) Marine Corps installations must not compete with a locally-available commercial recycling industry that offers a total SW resource recovery system as directed by SECNAVINST 4860.44. Installations should make every effort to use an established commercial industry.
- (3) Marine Corps installations should consider constructing resource recovery facilities only after a thorough study has been made of alternative methods for processing SW.

- (4) Marine Corps installations should design resource recovery facilities to process all residential, commercial, and institutional SW disposed of at DoD facilities, and they should convert as much as possible of the input SW into recycled material, fuel, or energy.
- g. <u>Returnable Beverage Containers</u>. Marine Corps installations must comply with state laws regarding beverage containers. They should bring to the attention of the CMC (LF) any conflicts between Federal (40 CFR 244) and state requirements, as well as any situations that preclude compliance.

h. Recyclable Materials Sales Program

- (1) Marine Corps installations must use the proceeds from the sale of recyclable materials to cover the operation, maintenance, and overhead costs incurred in the recycling operation. Use any excess funds for pollution prevention, environmental compliance, energy and safety projects, and/or nonappropriated morale or welfare purposes.
- (2) Only installations with a QRP may accumulate proceeds from the sale of recyclable materials. A QRP can be established by a base or station order and must include the following program requirements:
- (a) Designate through the CG/CO the managing entity. Potential managing units include: environmental affairs; facilities; morale, welfare, and recreation; or a similar staff entity.
- (b) Ensure fiscal accountability for all funds received and disbursed as per MCO 7301.116.
- (c) Record maintenance regarding the quantity and types of materials sold for recycling.
- (d) Develop a method of prioritizing projects/ activities to be funded from net proceeds. This process is usually accomplished by establishing a committee consisting of a cross section of installation organizations. This committee recommends priorities for the disbursement of revenues to the CG/CO.
- (e) Ensure that the CMC (LF) reviews all projects funded with the proceeds of recycling sales.

- (f) Implement the requirements in this Manual for the sale of recyclable material.
- (g) Notify the Defense Reutilization and Marketing Office (DRMO) that the installation has a QRP implemented by base or station orders as established by the Military Construction Codification Act. An installation may notify the DRMO and accumulate proceeds through the sale of recyclable materials during the period that a base or station order is being prepared.
- (3) Marine Corps installations with QRP's may sell recyclable materials directly without using the DRMO. A cost analysis should be performed by the installation to determine if better value can be achieved for the QRP by performing direct sales.

i. Records Requirements

- (1) Federal regulations require the Marine Corps to determine what actions will be, or have been, adopted regarding source separation requirements. In situations when a decision is made not to source separate, the decision must be based on a fully supported analysis. If a source separation program is adopted, the sale of recyclable materials obtained as a result of the source separation or resource recovery guidelines or the sale of used petroleum products, less the cost of sales and handling, may be administered through the Defense Logistics Agency (DLA) and DRMO under the provisions of DoD 4160.21-M or sold by the QRP per DoD policy. This procedure does not apply to waste materials turned over to voluntary organizations or civilian communities for recycling, or to military exchanges and commissary stores where the activity owns or leases its own processing equipment.
- (2) The DRMO must deposit 100 percent of recyclable material sales proceeds net of cost obtained as a result of the source separation or resource recovery guidelines or the sale of used petroleum products to the account designated by a managing activity that operates the QRP. The designated account number must appear on the Disposal Turn-in Document in order for the DRMO to return the proceeds. Procedures governing the sale of recyclable materials must be consistent with section 203 of the Federal Property and Administrative Services Act of 1949. Although the screening for utilization, transfer, and donation as described in DoD 4160.21-M is not required prior to offering recyclable materials for sale, such screening may occur at the discretion of the DLA director.

- j. <u>Procurement</u>. In 40 CFR 247 and EO 12873, October 20, 1993, the product areas requiring affirmative procurement actions include: recycled paper, cement or concrete containing fly ash, retread tires, building insulation, and used oil. Marine Corps installations should promote procurement of these and other recovered materials.
- 6. <u>Environmental Compliance</u>. See chapter 4 of this Manual for information on policy, responsibility, and procedures for achieving compliance with applicable EO's, and Federal, state, interstate, and regional statutory and regulatory environmental requirements.

17105. TERMS AND DEFINITIONS

- 1. <u>Composting</u>. A controlled process for managing the degradation of plant and other organic wastes to produce a useful product that can be used as mulch or soil conditioner.
- 2. Environmental Management Hierarchy (EMH). National policy established by the PPA that "pollution should be prevented or reduced at the source whenever feasible; pollution that cannot be prevented should be recycled in an environmentally safe manner, whenever feasible; pollution that cannot be prevented or recycled should be treated in an environmentally safe manner whenever feasible; and disposal or other release into the environment should be employed only as a last resort and should be conducted in an environmentally safe manner." When assessing solutions to compliance requirements, installations and commands will employ EMH, emphasizing:
 - Source reduction.
 - b. Recycling.
 - c. Treatment.
 - d. Disposal.
- 3. Excluded Materials. Excluded materials may not be sold through a QRP, and the proceeds from their sale will not be returned to a QRP. Excluded items include, but are not limited to:
 - a. Government-furnished material.

- b. Precious metal bearing scrap.
- c. HW (including household HW).
- d. Ozone depleting substances.
- e. Electrical components.
- f. Unopened containers of solvents, paints, or oil.
- g. Fuels.
- h. Material that can be sold (as is) as a usable item.
- i. Repairable items that may be used again for their original purposes or functions, e.g., used vehicles, vehicle, or machine parts, etc.
- j. Ships, aircraft, weapons, and other material required to be demilitarized or destroyed, as well as scrap resulting from demilitarization.
- k. All MLI's and SLI's as defined in DoD 4160.21-M
 (reference (y)), Defense Reutilization and Marketing Manual,
 23 March 1990, except firing range-expended brass and mixed metals gleaned from firing range cleanup.
- 1. Types of surplus personal property whose sales proceeds must be deposited to accounts other than a QRP per 32 CFR 172, Appendix B. See below:
- (1) Scrap generated from Naval Working Capital Fund (NWCF) activities;
- (2) Usable personal property purchased by NWCF activities;
 - (3) Property purchased with commissary surcharge funds:
- (4) Automatic data processing equipment owned by the General Services Administration;
- (5) Property purchased for the Military Assistance Program or purchased with Foreign Military Sales administrative funds;
 - (6) Coast Guard property;

- (7) Property owned by nonappropriated fund activities;
- (8) Lost, abandoned, or unclaimed privately-owned personal property;
- (9) Property owed by a country or international organization; and
- (10) Bones, fats, and meat trimmings generated by a commissary.
- 4. <u>Managing Activity</u>. An administrative element assigned to manage the recycling program including personnel, funds, and equipment.
- 5. MSWLF's. A discrete area of land or an excavation that receives household waste and that is not a land application unit, surface impoundment, injection well, or waste pile, as those terms are defined under 40 CFR 257.2. An MSWLF also may receive other types of RCRA subtitle D wastes, such as commercial SW, nonhazardous sludge, small quantity generator waste, and industrial SW. Such a landfill may be publicly or privately owned. An MSWLF may be a new MSWLF, an existing MSWLF, or a lateral expansion.
- 6. <u>ORP</u>. An organized operation that diverts or recovers scrap or waste streams, and that identifies, segregates, and maintains the integrity of the recyclable materials in order to maintain or enhance the marketability of the materials.
- 7. Other ORP Materials. Materials that fit neither the definition of recyclable materials nor the definition of excluded materials are classified as other QRP materials.
- 8. <u>Recovered Material</u>. Waste materials and by-products that have been recovered or diverted from solid waste but such term does not include those materials and by-products generated from and commonly used within an original manufacturing process (42 U.S.C. 6903).
- 9. Recyclable Materials. Recyclable materials can include, but are not limited to: high quality paper and paper products; mixed paper, newspaper, cardboard; plastic; metal cans; glass; used oil (except when the oil is an HW); batteries; and tires. In addition, scrap (including ferrous and non-ferrous scrap), firing range-expended brass, and mixed metals gleaned from firing range cleanup that do not require demilitarization and that are MLI's

- or SLI's may be included in a QRP. Expended brass must be crushed, shredded, or otherwise destroyed prior to public sale.
- 10. <u>Recycling</u>. The series of activities, including collection, separation, and processing, by which products or materials are recovered from the SW stream for use in the form of raw materials in the manufacturing of new products other than fuel for producing heat or power by combustion (from EO 12873, October 20, 1993, section 207).
- 11. Resource Recovery. The process of recovering material or energy from SW.
- 12. Resource Recovery Facility. Any physical plant that processes nonhazardous, commercial, or institutional SW biologically, chemically, or physically and recovers useful products, such as shredded fuel, combustible oil or gas, steam, metal, and glass, for resale or reuse.
- 13. <u>SW</u>. Any garbage, refuse, trash, rubbish, sludge, waste, or scrap from commercial, agricultural, industrial, or residential activities. This classification does not include any of those materials that are identified as HW.
- 14. <u>Source Reduction</u>. Source reduction, as defined in the PPA, is any practice that:
- a. Reduces the amount of any hazardous substance (HS), pollutant, or contaminant entering any waste stream or otherwise released into the environment (including fugitive emissions) prior to recycling, treatment, and disposal; and
- b. Reduces the hazards to public health and the environment associated with the release of such substances, pollutants, or contaminants. The term includes equipment or technology modification, process or procedure modification, reformulation or redesign of products, substitution of raw materials, and improvements in housekeeping, maintenance, training, or inventory control. Source reduction does not entail any form of waste management (e.g., recycling, treatment, and disposal).
- 15. <u>Source Separation</u>. The separation of recyclable materials at their point of generation by the generator.
- 16. <u>Waste Office Paper</u>. Materials such as letterhead, copy paper, miscellaneous business forms, stationary, typing paper, tablet sheets, and computer printouts and cards. Classified

wastes are explicitly excluded, except when applicable security directives allow their inclusion.

CHAPTER 17

SOLID WASTE MANAGEMENT AND RESOURCE RECOVERY

SECTION 2: MARINE CORPS POLICY

17200. MARINE CORPS SOLID WASTE (SW) MANAGEMENT PROGRAMS

1. <u>General</u>

- For disposal purposes, all SW generated at Marine Corps installations is considered property of the Government except in those situations when Marine Corps exchanges and commissary stores salvage and dispose of their recoverable resources. Marine Corps installations must strive to reduce SW generation. SW collection, disposal, and resource recovery programs at Marine Corps installations must be implemented in the most cost-effective and environmentally acceptable manner. Changing mission requirements and market conditions necessitate the periodic review of these operations as commercial facilities become available, or as the installation's industrial-type activities change. Marine Corps installations must comply with the guidance of MCO 4860.3, for SW collection, storage, and disposal: and with NAVFAC P-442, for the establishment and/or disestablishment of resource recovery/source separation programs. Contractors on Marine Corps installations must dispose of their SW per their contract requirements.
- b. The Marine Corps will design SW disposal programs as total systems that consider the relative economic advantages of the latest technology as well as the potential for resource recovery. Explore shredding, compacting, energy recovery, and similar processes. Develop installation SW management plans according to the following hierarchy (for more information on the pollution prevention EMH, see chapter 15):
 - (1) Source reduction.
 - (2) Material reuse.
 - (3) Recycling.
 - (4) Energy recovery.
 - (5) Disposal.

- c. All Marine Corps installations and commands must comply with DoD policy for recycling programs and procedures in accordance with the specifications of appendix L (see paragraph 17104.4b).
- 2. Source Reduction. Marine Corps source reduction programs must incorporate the following, where feasible:
 - Composting to facilitate yard waste reduction.
- Reducing excessive packaging, especially where packaging is used for attractive merchandising or convenience functions.
 - c. Reducing waste generation in an office by:
- (1) Reusing materials (e.g., file folders, paper clips, interoffice routing envelopes).
 - (2) Dual-sided copying.
 - (3) Using electronic mail instead of paper memos.
 - (4) Reducing mail and distribution lists.

SW Resource Recovery

- All Marine Corps installations, where cost-effective, must implement source separation for recycling and develop a single authorized QRP which has controls to ensure that excluded materials, including those listed in 32 CFR 172.2(b)(3), are not sold through the program. All Marine Corps commands/units and tenants must participate in the host activity's QRP. Materials for which proceeds can be obtained must be sold through the host's QRP. Industrial-funded activities must maintain separate accounting for recycled materials purchased with industrial funds.
- All Marine Corps installations must establish an installation recycling program for the following purposes:
- (1) To protect the environment and prevent the depletion of valuable natural resources;
- (2) To comply with Federal, state, and local environmental laws and regulations;

- (3) To reduce the volume of waste disposed in landfills;
- (4) To reuse readily available resources;
- (5) To avoid excessive costs for the disposal of SW by other means; and
- (6) To obtain proceeds from the sale of recyclable material.
- c. Marine Corps installations at a minimum must segregate the following materials for recycling:
 - (1) Scrap metal,
 - (2) High-grade paper,
 - (3) Corrugated containers, and
 - (4) Aluminum cans.
- d. Consider exceptions to recycling these materials only in the following situations:
- (1) When state or local regulations do not require recycling.
- (2) When market analyses conducted by the DRMO or the managing activity indicate that the recovered materials cannot be sold or disposed of economically because of a lack of market demand. Such analyses must include the applicable portions of the life-cycle cost associated with the operation, maintenance, closure, and post-closure of Marine Corps-owned SW landfills and the applicable cost of disposal by contract.
- (3) When the net costs exceed the net income plus avoided costs for disposal by another means.
- e. Make no exceptions where environmental laws and regulations require specific materials to be recycled or removed from the waste stream.
- f. Develop appropriate management controls for recyclable materials that may be hazardous, such as lead-acid batteries.

- g. Prior to any source separation effort, request from the DRMO an estimate of the market for recovered materials, including estimated returns from sales and the timing of market demand.
- h. Screen QRP materials for reutilization, transfer, and donation prior to selling directly.
- i. Consider the following additional materials in the development of recyclable material markets:
 - (1) Glass.
 - (2) Plastic.
 - (3) Newspaper from housing areas.
 - (4) Scrap wood.
 - (5) Other waste as market demand arises.
- j. Ensure that United States trade security control policies are followed prior to selling firing range-expended brass or mixed metals gleaned from firing range cleanup that do not require demilitarization and that are MLI's or SLI's.
- k. Update economic analysis and market determinations as market conditions change significantly, and maintain such records on file at the managing installation.
- l. To maximize recycling, consider handling recyclable materials that are not profitable for a QRP through SW contracts where the cost in the contract to have the materials recycled is less than the cost in the contract to dispose of the material. Ensure that the contract includes recordkeeping of quantities and types of material recycled in this manner.

4. Marine Corps Records

a. Each installation must determine what actions will be, or have been, taken to adopt source separation requirements. When an installation decides not to source separate, such a decision must be based on a fully supported analysis. To determine SW management requirements, each installation must keep records of disposed SW and materials recycled. Records may be kept in the form of weight tickets, the number and size of truckloads delivered, contractor billings, or any other means of accurately determining or establishing the rate and volume of SW generated.

- b. After establishing an organized QRP or if recycling is concurrent with such program development, the installation must determine whether to sell material directly or through their DRMO. If material is to be sold directly, the QRP procedures must address the identification of recyclable materials, excluded materials, and other QRP materials. The installation must coordinate with the DRMO when selling through the DRMO to determine whether the specific material to be sold actually is recyclable material. Refer disputes through the chain of command. Proceeds from sales, regardless of the type of sales transaction, are returned to the installation as described below:
- (1) All Marine Corps installations, including those that operate under NWCF, may participate in the program.
- (2) Deposit proceeds from the sale of recyclable materials at an installation with a QRP to account number **F3875.27 "Budget Clearing Account (suspense)" as instructed by MCO 7301.116. Accumulated funds in account number **F3875.27 are not affected by fiscal year end, so that proceeds acquired during one fiscal year may be carried forward and merged with proceeds of subsequent fiscal years. The proceeds must be segregated within the account to allow accounting as to the amounts collected and their disposition.
- **F3875.27 to cover costs of operations, maintenance, and overhead for the processing and handling the recyclable materials (including the cost of any equipment purchases for recycling purposes). Military personnel must not be reimbursed from the proceeds of this account. If funds from account **F3875.27 are not sufficient to cover the costs of processing and handling these recyclable materials within a fiscal year, funds normally available for operations and maintenance will be used to cover the remainder.
- (4) If a balance remains, not more than 50 percent of that balance may be used at the installation for projects for environmental compliance, energy conservation, and occupational safety and health activities. Construction projects are limited to 50 percent of the minor construction authority and must be paid for with proceeds from the sale of recyclable materials. Environmental compliance, energy conservation, and occupational safety and health projects must not be included in the normal minor construction program if sufficient recycling proceeds are available at the installation.

- (5) Any remaining balance may be transferred to one or more of the local nonappropriated fund instrumentalities supporting MWR activities at the installation as defined in existing DON regulations.
- (6) If the balance of an installation's proceeds remaining in account number **F3875.27 exceeds \$2 million at the end of a fiscal year, deposit the amount in excess of \$2 million into the United States Treasury as miscellaneous receipts.
- 5. <u>Marine Corps Solid Waste Annual Report (SWAR)</u>. This report is no longer required. The data that was collected on this report is now part of the Pollution Prevention Annual Data Summary (P2ADS). Specific guidance on P2ADS was provided in the CMC letter 5090 LFL/S-157, 26 January 1998.
- 6. <u>Technical Assistance</u>. NAVFACENGCOM EFD's/EFA's will provide technical assistance to Marine Corps installations upon request.
- 17201. MARINE CORPS INSTALLATIONS IN FOREIGN COUNTRIES. Outside the United States, the disposition of recyclable and other QRP materials, derived from goods that have been imported duty free, is accomplished in accordance with the status of forces, surplus or excess property agreements, or other international agreements with host nations.

CHAPTER 17

SOLID WASTE MANAGEMENT AND RESOURCE RECOVERY

SECTION 3: RESPONSIBILITIES

17300. CMC (LF) AND CMC (LFF)

- 1. Provide information and advice to installation commanders regarding proposed and final rules and regulations pertaining to SW management and resource recovery and uniformly apply Marine Corps policy as set forth in this Manual.
- 2. Ensure compliance with the specifications provided in appendix L (see paragraph 17104.4b).
- 3. Assist installations in resolving disputes with Federal, state, local, and foreign regulatory agencies as required.
- 4. Conduct special environmental compliance and protection studies with regard to SW management to assist in establishing policy or initiating actions.
- 5. Ensure, through field visits and the Environmental Compliance Evaluation Program, Marine Corps cooperation and compliance with Federal, state, and local regulatory agencies with regard to SW regulations.
- 6. Track Marine Corps progress toward meeting established SW minimization goals, using the P2ADS.

17301. <u>CG/CO OF MARINE CORPS INSTALLATIONS AND COMMANDER MARINE</u> FORCES RESERVE (COMMARFORRES)

1. Identify and submit to the CMC (LFL) and the CMC (LFF) project documentation and funding requests for SW management and resource recovery facilities that are required to maintain compliance with applicable existing and emerging regulations and permits. Program and budget for personnel, equipment, materials, training, and monitoring required to comply with SW management and resource recovery requirements. Pay appropriate Federal, state, and local fees. Ensure that the EMH is employed, pollution prevention alternatives evaluated, and life-cycle cost

impacts assessed, in evaluating and selecting projects that address compliance requirements.

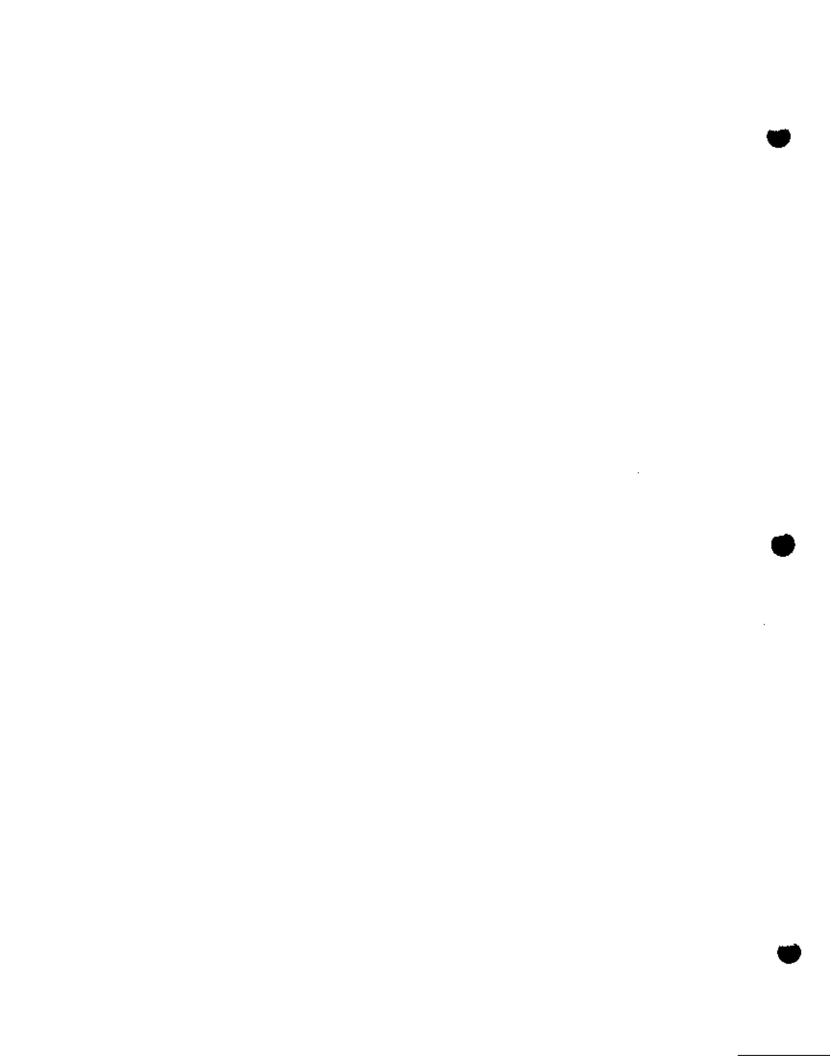
- 2. Ensure that all required Federal, state, and local permits are applied for and obtained. Sign certifications and permit applications, as required, for construction of all SW management and resource recovery projects.
- 3. Ensure that a base or station order is written implementing local SW management and resource recovery policies.
- 4. Establish source separation programs and resource recovery facilities as feasible, and implement their operation through base or station orders.
- 5. If in a listed SMSA, cooperate with the designated SMSA lead agency.
- 6. Determine whether QRP or recycling sales programs are applicable.
- 7. Obtain applicable state or local permits and licenses for the site location and operation of on-site landfills.
- 8. Ensure that SW is disposed of according to applicable Federal, state, and local requirements.
- 9. Develop a system (e.g., listing, dumpster markings) to notify all base and unit personnel of the types of SW that may be placed in SW collection containers, and ensure that only those acceptable wastes are placed in the containers.
- 10. Ensure that off-base landfills receiving Marine Corps SW are licensed and are operating under applicable permits and regulations.
- 11. Ensure that Marine Corps installations located in the United States and its territories and possessions comply with certain Department of Agriculture (DOA) inspection and disposal requirements if they receive garbage from vehicles and/or aircraft arriving from outside the United States. These regulations are designed to prevent the spread of plant pests and animal diseases.
- 12. Develop SW management plans, including source reduction and recycling programs and resource recovery facilities as required.

17301

- 13. Ensure that recyclable material direct sales performed by the QRP are performed in accordance with applicable laws and guidance.
- 14. Submit P2ADS data annually to NFESC and the CMC (LF).

17302. CG/CO OF MARINE CORPS COMMAND/UNIT AND TENANT TRAINING

1. Cooperate with the organization, lessor, or host activity that implements the SW management program outlined in this chapter.



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CHAPTER 18

UNDERGROUND STORAGE TANKS

SECTION 1: INTRODUCTION

- 18100. <u>PURPOSE</u>. This chapter establishes Marine Corps policy and responsibilities for compliance with statutory requirements for UST's containing petroleum products and hazardous substances (HS).
- 18101. APPLICABILITY. See paragraph 1101.
- 18102. <u>BACKGROUND</u>. The 1986 amendments to the Resource Conservation and Recovery Act (RCRA) included provisions to prevent releases from UST's, mandating a comprehensive regulatory program. An UST is defined as any combination of tank and underground pipes in which 10 percent or more of the volume of the tank is beneath the ground surface (including associated underground piping).

18103. FEDERAL STATUTES

1. <u>Hazardous and Solid Waste Amendments (HSWA) of 1984 (Public Law 98-616)</u>

- a. The HSWA extended and strengthered the provisions of the Solid Waste Disposal Act (SWDA) as amended by RCRA. Subtitle C of RCRA regulates UST's that contain hazardous waste (HW). Subtitle I of the HSWA provides for the development and implementation of a comprehensive regulatory program for UST's containing HS's or petroleum products, and releases of those substances into the environment. HS's regulated under subtitle I include any substance listed in section 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).
- b. The HSWA requires that Federal installations comply with all Federal and applicable state and local requirements regarding UST's, including payment of registration fees and permit fees when such fees are not taxes.

- c. Federal regulations outline procedures by which the Environmental Protection Agency (EPA) may approve state programs to replace the Federal UST requirements, if those state programs have standards that are no less stringent than the Federal requirements and provide adequate enforcement of those standards. States with an approved UST program will have primary enforcement responsibility in their states. Currently, most states have UST regulatory programs in place. Until the EPA approves a state program, installations must comply with all applicable provisions of both the Federal and state UST programs. After the EPA approves a state's program, installations must comply with applicable state requirements.
- d. Section 9002 of RCRA bars installing unprotected tanks after May 7, 1985. All new UST's must meet corrosion protection requirements. In addition, the EPA or designated state agency must be notified of the presence of existing regulated UST's. Provisions in the new UST program required the EPA to develop regulations for new tanks including design, construction, installation, release detection, and compatibility standards. This rule was promulgated September 23, 1988, and became effective December 22, 1988 (40 CFR 280, Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks).
- 2. The Superfund Amendments and Reauthorization Act (SARA) of 1986 (Public Law 99-499). Section 205 of SARA amended the SWDA by defining the term "petroleum" to mean petroleum, including crude oil or any fraction thereof, that is liquid at standard conditions of temperature and pressure (60°F and 14.7 pounds per square inch absolute (psia)). Also, section 205 of SARA added provisions related to state UST inventories and financial responsibility for UST owners (i.e., the EPA/state authority for corrective actions, the EPA/state cost recovery for remedial actions, and state/political subdivision rights to adopt and enforce more stringent requirements than Federal requirements on UST's).

18104. REQUIREMENTS

1. <u>General Tank Standards and Operating Requirements</u>. UST regulations applicable to Federal installations are found in 40 CFR 280, subparts A-G. A brief description of the requirements follows:

- a. In 40 CFR 280, subpart A gives the definitions for the UST program and applicability of the regulations to each system.
- b. For a tabular summary of the basic requirements and when they must be operative, see appendix G-1. Appendix G-2 provides information on responding to releases from UST's.
- c. Federal UST regulations (40 CFR 280) apply to both existing (installed before December 1988) and new (installed after December 1988) tanks and the associated piping network. Tank standards stipulated under these regulations, including corrosion protection and spill/overflow prevention, are applicable immediately for new tanks or by December 22, 1998, via upgrade or retrofit for existing tanks. Tanks unable to meet Federal UST standards must be closed in compliance with 40 CFR 280, subpart G.
- d. Wastewater treatment tank systems, UST's containing radioactive material (Atomic Energy Act of 1954), UST systems that are part of an emergency generator system at nuclear power generation facilities, airport hydrant fuel distribution systems, and UST systems with field-constructed tanks are deferred from the requirements of 40 CFR 280 except for subpart F governing release response and corrective action requirements.
- e. Monitor transfer operations to ensure that spilling or overflowing does not occur.
- f. Maintain and inspect corrosion protection measures, including cathodic protection, to ensure proper operation. A cathodic protection tester should perform cathodic protection maintenance activities.
- g. UST systems must be made of, or lined with, materials compatible with substances stored in the UST system.
- h. Conduct repairs to UST systems per a code of practice developed by a nationally recognized association or an independent testing laboratory; repairs may be made by the manufacturers' authorized representatives. Test repaired tanks operability for tightness and corrosion protection, and maintain records of all repairs for the remaining operating life of the UST system. Internal inspections of repaired tanks, using appropriate confined space entry procedures, may be permitted in lieu of tightness testing.

- i. Maintain written records demonstrating compliance with operations and maintenance requirements.
- j. The owner/operator must report all existing UST's and installation certifications for new UST systems to the proper agency. Owners/operators must also report releases, spills, and corrective actions planned in cleanup procedures.

2. Release Detection

- a. The 40 CFR 280, subpart D identifies release detection requirements.
- b. In addition to compliance with tank standards identified under 40 CFR 280.20 and 40 CFR 280.21, new, existing upgraded, and existing nonupgraded tanks and pipes must provide methods for release detection. Such requirements are to be phased in for existing tanks and piping systems, while new tanks and associated piping networks must provide methods for release detection upon installation. The schedule for phasing in release detection requirements regarding existing systems is based on the age of the tank and piping. The phase-in process began December 22, 1989, for tanks 25 years old or older (see appendix G-1). As of December 22, 1993, all piping systems and existing tanks must have complied with release detection requirements.
- c. Specific types of release detection methods to be employed are defined in 40 CFR 280, subpart D (see appendix G-3). The owner/operator must choose from the options outlined in these regulations: release detection will consist of one of the monthly monitoring methods as defined under 40 CFR 280.43(d)-(h) or tank tightness testing in combination with monthly inventory control. Tank tightness testing is required annually for existing tanks not yet meeting upgrade requirements and can only be used to meet release detection requirements until December 22, 1998. Tank tightness testing at intervals of 5 years is allowed for new tanks or tanks upgraded with corrosion protection until December 22, 1998, or 10 years after installation/upgrade, whichever date is later. The employment of release detection methods required under 40 CFR 280, subpart D, are necessary for the life of the tank and piping system.
- d. While the use of a release detection option that involves the use of tank tightness testing may appear to be the less difficult way to meet initial regulatory requirements, it may not be the most prudent. This is especially true if there are plans to upgrade tanks to meet long-term storage needs. It is wise in

such cases to consider the use of long-term monitoring methods, as opposed to tank tightness testing that is considered to be an interim release detection option only.

e. Maintain records documenting compliance with release detection requirements for 5 years, or a length of time to be determined by the applicable regulatory agency.

3. Release Reporting, Investigation, and Confirmation

- a. 40 CFR 280, subpart E, outlines release reporting, investigation, and confirmation requirements.
- b. A suspected release from a UST system must be reported to the state implementing agency within 24 hours. The following discoveries constitute a suspected release:
 - (1) Sudden loss of product.
 - (2) Erratic behavior of dispensing equipment.
 - (3) Unexplained presence of water in a tank.
- (4) Discovery of free product or vapor at the site or surrounding area, or when release detection methods indicate a release occurrence. Exceptions to the reporting requirement include: when tank system dispensing/pumping equipment is found to be defective but not leaking and can be replaced or repaired immediately; or in the case of inventory control, if the second month of data does not confirm the initial results; or when the monitoring device is found to be defective and is immediately repaired or replaced and recalibrated, and additional monitoring does not confirm the initial results. Follow the guidance in chapter 7 for reporting HS releases.
- c. The regulatory agency may require off-site impact determinations under certain circumstances, such as those described in 40 CFR 280.51.
- d. Suspected releases of regulated substances must be investigated and confirmed within 7 days by conducting a UST system test or another confirmation procedure established by the state. Further investigation is not required if a system test indicates a leak does not exist and no environmental contamination is present. If system testing indicates that no leak exists but environmental contamination is the cause for

suspecting a release, a site check, per 40 CFR 280.52(b), is required.

- e. UST system spills or overfills must be immediately cleaned up and reported to the state within 24 hours for spills or overfills of:
- (1) Over 25 gallons or if a petroleum sheen is present on nearby surface water for tanks containing petroleum products, and
 - (2) HS's exceeding reportable quantities under CERCLA.
- f. If cleanup cannot be accomplished within 24 hours, immediately notify the regulatory agency.
- g. Spills and overfills resulting in the release of petroleum that are less than 25 gallons must be contained immediately and cleaned up within 24 hours. If cleanup cannot be accomplished within 24 hours, immediately notify the regulatory agency.

4. Release Response and Corrective Action

- a. 40 CFR 280, subpart F outlines release response and corrective action requirements.
- b. Upon discovery of a confirmed or suspected release, owners and operators must notify the EPA and appropriate state agencies within 24 hours. Upon confirmation of a release, owner/operators must stop further release of the regulated substance from the UST system and identify and mitigate fire, explosion, and vapor hazards. Confirm the suspected release within 7 days of the initial discovery (40 CFR 280.52).
- c. The following initial abatement measures are required for a confirmed release, as identified in 40 CFR 280.62:
- (1) Remove as much of the regulated substance as necessary from the UST system to prevent further release;
- (2) Remedy hazards posed by UST releases. Hazards include contaminated soils below ground level and migration of the regulated substance into surrounding soils and groundwater;
- (3) Continue to monitor and mitigate any fire and safety hazards;

- (4) Measure prudently for the presence and extent of releases around the UST site;
- (5) Alleviate any hazards posed by contaminated soils and materials that were excavated or exposed as a result of any corrective or investigative activities. The owner/operator must comply with applicable Federal, state, and local regulations regarding disposal or treatment of these substances; and
 - (6) Report initial abatement steps within 20 days.
- d. The EPA or state agency requires the submission of an initial site characterization report which includes at a minimum the determination of: the nature and extent of the release; the estimated quantity of the release; a free product assessment; and information on surrounding population, geology, water supply, wells, utilities, climate, and land use.
- e. The site characterization report must be submitted to the regulatory agency within 45 days of release confirmation or another reasonable time as determined by the regulatory agency.
- f. If free product is discovered, the owner/operator must begin abatement of it as soon as possible and to the maximum extent practicable. All free product abatement and disposal practices must comply with those listed in 40 CFR 280.64.
- g. Investigate soil and groundwater contamination to determine the extent of the contamination plume. Submit the information obtained during the investigation to the proper regulatory agency. Submission of a corrective action plan to the appropriate regulatory agency may be required, with additional information on the condition and extent of contaminated soil, groundwater remediation actions, and demonstration that adequate protection to human health, safety, and the environment is being provided. The regulatory agency will review this corrective action plan to determine if it will adequately protect human health, safety, and the environment. The regulatory agency may approve the plan or make any modifications prior to implementation.
- h. The regulatory agency must notify members of the public for each confirmed release that requires a corrective action plan and make the corrective action plan available to the public, upon request. Additionally, the public must be notified if the selected corrective action fails to meet the established cleanup goals.

5. Out-of-Service UST Systems and Closure

- a. The regulations applicable to this section are located in 40 CFR 280, subpart G.
- b. Temporary closure of a UST system requires continued operation and maintenance of corrosion protection and release detection measures. Continue to maintain corrosion protection even when the UST system is empty.
- c. Temporary closure of 3 months or more requires that vent lines be left open and all other lines, pumps, manways, and ancillary equipment be capped and secured.
- d. Temporary closure of more than 12 months requires permanent closure of the UST system if it does not meet either new UST performance standards or corrosion protection upgrading standards. The regulatory agency may grant an extension of the 12-month, temporary closure period.
- e. Owners/operators must notify the implementing agency 30 days prior to the permanent closure or change-in-service of a UST. Continued use of a UST to store a nonregulated substance is considered a "change-in-service." UST's must be emptied and properly cleaned prior to permanent closure or change-in-service, and closed tanks must be removed or filled with an inert solid and all tank openings must be capped. Owners/operators must perform a site assessment on UST's which undergo permanent closure or change-in-service. The site assessment must measure for the presence of contaminants in the places where they most likely will be present and detected. UST's which use proper groundwater or external vapor monitoring systems, which are operating in accordance with the applicable requirements, do not need to perform a site assessment if no release is detected at closure/change-in-service.
- f. Site assessment of an excavation zone and compliance with closure requirements may also apply to UST systems permanently closed before December 22, 1988, if the regulatory agency determines that the UST may pose a current or potential threat to human health, safety, or the environment.
- g. Maintain records documenting compliance with closure requirements for a period of 3 years after closure.
- 6. <u>Environmental Compliance</u>. See chapter 4 of this Manual for information on policy, responsibility, and procedures for

achieving compliance with applicable Executive Orders, and Federal, state, interstate, and regional statutory and regulatory environmental requirements.

18105. <u>TERMS AND DEFINITIONS</u>

- 1. Aboveground Release. Any release of a regulated substance from a UST to the surface of the land or surface water. This includes, but is not limited to, release from the aboveground portion of a UST system and aboveground releases associated with overfill and transfer operations as the regulated substance moves to or from a UST system.
- 2. Ancillary Equipment. Any devices including, but not limited to, piping, fittings, flanges, valves, and pumps used to distribute, measure, or control the flow of regulated substances to and from a UST.
- 3. <u>Cathodic Protection</u>. A technique to prevent corrosion of a metal surface by making that surface the cathode of an electrochemical cell. For example, a tank system can be cathodically protected through the application of either galvanic anodes or impressed current.
- 4. <u>Cathodic Protection Tester</u>. A person who can demonstrate understanding of the principles and measurements of all common types of cathodic protection systems as applied to buried or submerged metal piping and tank systems. At a minimum, the person must have education and experience in soil resistivity, stray current, structure-to-soil potential, and component electrical isolation measurements of buried metal piping and tank systems.
- 5. <u>Connected Piping</u>. All underground piping including valves, elbows, joints, flanges, and flexible connectors attached to a tank system through which regulated substances flow. For the purpose of determining how much piping is connected to any individual UST system, the piping that joins two UST systems should be allocated equally between them.
- 6. <u>Corrosion Expert</u>. A person who, by reason of thorough knowledge of physical sciences and the principles of engineering and mathematics acquired by a professional education and related practical experience, is qualified to engage in the practice of corrosion control on buried or submerged metal piping systems and metal tanks. Such a person must be accredited or certified as

being qualified by the National Association of Corrosion Engineers, or must be a registered professional engineer who has certification or licensing that includes education and experience in corrosion control of buried or submerged metal piping systems and metal tanks.

- 7. Excavation Zone. The volume containing the tank system and backfill material bounded by the ground surface, walls, and floor of the pit and trenches into which the UST system is placed at the time of installation.
- 8. Existing Tank System. A tank system used to contain an accumulation of regulated substances, or for which the installation has commenced on or before December 22, 1988. The installation is considered to have commenced if:
- a. The owner or operator has obtained all Federal, state, and local approvals or permits necessary to begin physical construction of the site or installation of the tank system; and
- b. Either a continuous on-site physical construction or installation program has begun; or
- c. The owner or operator has entered into contractual obligations, which cannot be canceled or modified without substantial loss, for physical construction at the site or installation of the tank system to be completed within a reasonable time.
- 9. Flow-through Process Tank. A tank that forms an integral part of a production process through which there is a steady, variable, recurring, or intermittent flow of materials during the operation of the process. Flow-through process tanks do not include tanks used for the storage of material prior to their introduction into the production process or for the storage of finished products or byproducts from the production process.
- 10. Free Product. A regulated substance that is present as a nonaqueous phase liquid (i.e., liquid not dissolved in water).
- 11. <u>HS UST System</u>. Any UST system that contains an HS defined in section 101(14) of CERCLA (but not including any substance regulated as an HW under subtitle C of RCRA) or any mixture of such substances and petroleum in a UST system that does not constitute a petroleum UST system.

- 12. Heating Oil. Petroleum that is Nos. 1, 2, 4, and 5 (light and heavy), and 6 (technical grades), other residual fuel oils (including Navy Special Fuel Oil and Bunker C), and other fuels when used as substitutes for one of these fuel oils. Heating oil is typically used in the operation of heating equipment, boilers, or furnaces. Oil, as defined in 40 CFR 122.2, is oil of any kind or in any form including, but not limited to, petroleum, fuel oil, sludge, or oil refuse.
- 13. <u>Hydraulic Lift Tank</u>. A tank holding hydraulic fluid for a closed-loop mechanical system that uses compressed air or hydraulic fluid to operate lifts, elevators, and other similar devices.
- 14. <u>Liquid Trap</u>. Sumps, well cellars, and other traps used in association with oil and gas production, and gathering and extraction operations (including gas production plants) for the purpose of collecting oil, water, and other liquids. These liquid traps may temporarily collect liquids for subsequent disposition or reinjection into a production or pipeline stream, or may collect and separate liquids from a gas stream.
- 15. New Tank System. A tank system that will be used to contain an accumulation of regulated substances and which installation commenced after 22 December 1988.
- 16. <u>Operator</u>. Any person in control of or having responsibility for the daily operation of a UST system.
- 17. <u>Overfill Release</u>. A release that occurs when a tank is filled beyond its capacity, resulting in a discharge of the regulated substance to the environment.
- 18. Owner. In the case of an UST system in use on 8 November 1984 or brought into use after that date, any person who owns an UST system used for storage, use, or dispensing of a regulated substance; and, in the case of any UST system in use before 8 November 1984, but no longer in use on that date, any person who owned the UST immediately before the discontinuation of its use.
- 19. <u>Petroleum</u>. Petroleum, including crude oil or any fraction thereof, that is liquid at standard conditions of temperature and pressure $(60^{\circ} \, \text{F} \text{ and } 14.7 \, \text{psia})$.
- 20. <u>Petroleum UST System</u>. A UST system that contains petroleum or a mixture of petroleum with minimum quantities of other regulated substances. Such systems include those containing

motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents, and used oils.

21. Regulated Substance

- a. Any substance defined in section 101(14) of CERCLA, but not including any substance regulated as an HW under subtitle C of RCRA.
- b. Petroleum, including crude oil or any fraction thereof, that is liquid at standard conditions of temperature and pressure (60° F and 14.7 psia).
- c. The term "regulated substance" includes, but is not limited to, petroleum and petroleum-based substances consisting of a complex blend of hydrocarbons derived from crude oil through processes of separation, conversion, upgrading, and finishing, such as motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents, and used oils.
- 22. <u>Release</u>. Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment. The term excludes:
- a. Any release that results in exposure to persons solely within a workplace, with respect to a claim which such persons may assert against the employer of such persons:
- b. Emissions from the engine exhaust of a motor vehicle, rolling stock, aircraft, vessel, or pipeline pumping station engine;
- c. Release of source, byproduct, or special nuclear material from a nuclear incident, as those terms are defined in the Atomic Energy Act. If such release is subject to requirements with respect to financial protection established by the Nuclear Regulatory Commission under section 170 of this Act, or for the purposes of section 104 of CERCLA, or any other response action, any release of source, byproduct, or special nuclear material from any processing site designated under section 102(a)(1) or section 302(a) of the Uranium Mill Tailings Radiation Control Act; and
 - d. The normal application of fertilizer.

- 23. <u>Release Detection</u>. Determining whether a release of a regulated substance has occurred from a UST system into the environment or into the interstitial space between the UST system and its secondary barrier or containment.
- 24. <u>Septic Tank</u>. A watertight, covered receptacle designed to receive or process, through liquid separation or biological digestion, the sewage discharged from a building sewer. The effluent from such a receptacle is distributed through the soil, and settled solids and scum from the tank are pumped out periodically and hauled to a treatment facility.
- 25. Stormwater or Wastewater Collection System. Piping, pumps, conduits, and any other equipment necessary to collect and transport the flow of surface water runoff resulting from precipitation, or domestic, commercial, or industrial wastewater. The collection of stormwater and wastewater does not include treatment except where incidental to conveyance.
- 26. <u>UST's</u>. All tank systems containing regulated substances for which the tank volume, including piping, is 10 percent or more beneath the surface of the ground. The following tank systems are excluded from Federal UST regulations:
- a. Any UST system holding an HW listed or identified under subtitle C of RCRA, or a mixture of such an HW and other regulated substances.
- b. Any wastewater treatment tank system that is part of a wastewater treatment facility regulated under sections 402 or 307(b) of the Clean Water Act.
- c. Equipment or machinery that contains regulated substances for operational purposes, such as hydraulic lift tanks and electrical equipment tanks.
- d. Any UST system that has a capacity of 110 gallons or less.
- e. Any UST system that contains a minimum concentration of regulated substances.
- f. Any UST emergency spill or overflow containment system that is expeditiously emptied after use.
- g. Any residential tank containing motor fuel for noncommercial use with capacity of 1,100 gallons or less.

- h. Any tank storing heating oil for consumptive use on the premises.
- i. Any tank system on or above the floor of underground areas, such as basements or tunnels.
- j. Any septic tank, stormwater, or wastewater collection system.
 - k. Any flow-through process tank.
- 27. <u>Upgrade</u>. The addition or retrofit of a system with cathodic protection, lining, or spill and overfill controls to improve the ability of an UST system to prevent the release of product.
- 28. <u>UST System or Tank System</u>. The UST and any connected underground piping, underground ancillary equipment, and containment system, if any.
- 29. <u>Wastewater Treatment Tank</u>. A tank that is designed to receive and treat influent wastewater through physical, chemical, or biological methods.

CHAPTER 18

UNDERGROUND STORAGE TANKS

SECTION 2: MARINE CORPS POLICY

- 18200. COMPLIANCE WITH UNDERGROUND STORAGE TANK (UST)
 REQUIREMENTS. The Marine Corps UST program policy is to comply with all Federal and applicable state and local regulations pertaining to the operation and management of UST's.
 Additionally, Marine Corps installations must develop long-term management plans to establish procedures for achieving and maintaining compliance, as well as to prioritize corrective actions against environmental risk.
- 18301. COMPLIANCE WITH UNDERGROUND STORAGE TANK (UST) INVENTORY. One of the most important initial steps in meeting UST regulatory requirements is to develop adequate baseline data regarding an installation's tank population. Marine Corps installations must maintain a complete and accurate UST inventory. Complete inventories must have all applicable data elements listed for each system record. Update data elements to reflect significant changes in the UST condition, especially at critical points during the useful life of each UST (e.g., following installation, when upgraded or repaired, if a release occurs, at closure, etc.). Such information is necessary not only to develop and maintain a rational UST compliance strategy, but also to apply accurate, appropriate funding sources to required UST actions.

18202. COMPLIANCE WITH UNDERGROUND STORAGE TANK (UST) MANAGEMENT

- 1. Compliance with UST regulations is necessary to reduce environmental liability but results in far-reaching management and cost implications to the Marine Corps. A long-term approach to reducing UST related liability and the associated costs requires the development of installation UST management plans. These require Marine Corps installations to look beyond the specific regulatory compliance tasks and consider a comprehensive approach to effectively reduce environmental risk stemming from storage needs.
- The primary goal of the UST management plan is to design a strategy to achieve and maintain compliance with regulatory

requirements. An important secondary objective of the management plan is to allow installations to utilize UST systems as efficiently as possible, therefore reducing environmental risk while minimizing costs associated with compliance. Marine Corps UST management plans should include the following:

- A general UST inventory description and goal statement.
- b. A consolidation and reduction plan of existing UST systems to meet storage needs while minimizing environmental risk.
- c. An evaluation of alternate storage vessels such as aboveground tanks with proper spill prevention/containment or vaulted underground tanks to replace out-of-date UST's. Management plans should include economic considerations during the discussion of storage alternatives.
- d. A plan-of-action and milestones to replace/upgrade active UST's and to properly close abandoned UST's. Management plans should include a discussion of specific projects necessary to meet management goals.
- e. Procedures to ensure continued compliance into the future. Plans should include assignment of responsibilities to parties who will carry out compliance tasks such as inventory control, leak detection maintenance, corrosion protection maintenance, release reporting, and follow-up.
- f. A description of recordkeeping practices to be maintained on all aspects of UST management. Records must document the useful life of the UST and include installation, registration, maintenance, upgrades, closure, operator training, and release reporting from discovery through cleanup and UST closure.
- 3. In reference to the management of deferred UST systems, as defined in paragraph 18104.1d and 40 CFR 280.11 applies:
- a. No person may install an UST system listed in 40 CFR 280.10(c) for the purpose of storing regulated substances unless the UST system (whether of single- or double-wall construction):
- (1) Will prevent releases due to corrosion or structural failure for the operational life of the UST system.
- (2) Is cathodically protected against corrosion, constructed of noncorrodible material, steel clad with a

noncorrodible material, or designed in a manner to prevent the release of any stored substance; and

- (3) Is constructed or lined with material that is compatible with the stored substance.
- b. Notwithstanding paragraph 18202.3a of this section, an UST system without corrosion protection may be installed at a site that is determined by a corrosion expert not to be corrosive enough to cause it to have a release due to corrosion during its operating life.
- c. Owners and operators must maintain records that demonstrate compliance with the requirements of this paragraph for the remaining life of the tank.

18203. <u>FUNDING CATEGORIES</u>

- 1. <u>Primary Funding Categories for UST Closures, Replacements, Upgrades</u>
- a. Operations and Maintenance. Includes centrally and/or locally managed funds for repair (M1/M2) and minor construction (R1/R2). Investigations and other engineering support use (P) funds. Refer to MCO P11000.5 (vol. IV) and chapter 3 of this Manual for further information.
- b. <u>Military Construction</u>. Used for projects that exceed minor construction limits. Includes entire tank replacement for existing "contamination-free" sites or new tank construction complying with MCO P11000.12 (vol. II).
- c. The Defense Logistics Agency, Defense Fuel Supply Center (DFSC). Used for projects that involve DFSC-owned fuel, DFSC funds can be used for environmentally related minor construction, major repair, and military construction projects, as well as certain recurring costs.
- d. <u>Defense Environmental Restoration Account (DERA)</u>. Used for the cleanup of environmental contamination from UST's, Eligibility for DERA funding is linked with initial leak detection required by the Federal regulations. If site contamination is discovered prior to or during the initial leak detection that occurred no later than 22 December 1993, the site investigation and cleanup are eligible for DERA funding. After initial leak detection is completed and has shown that a system

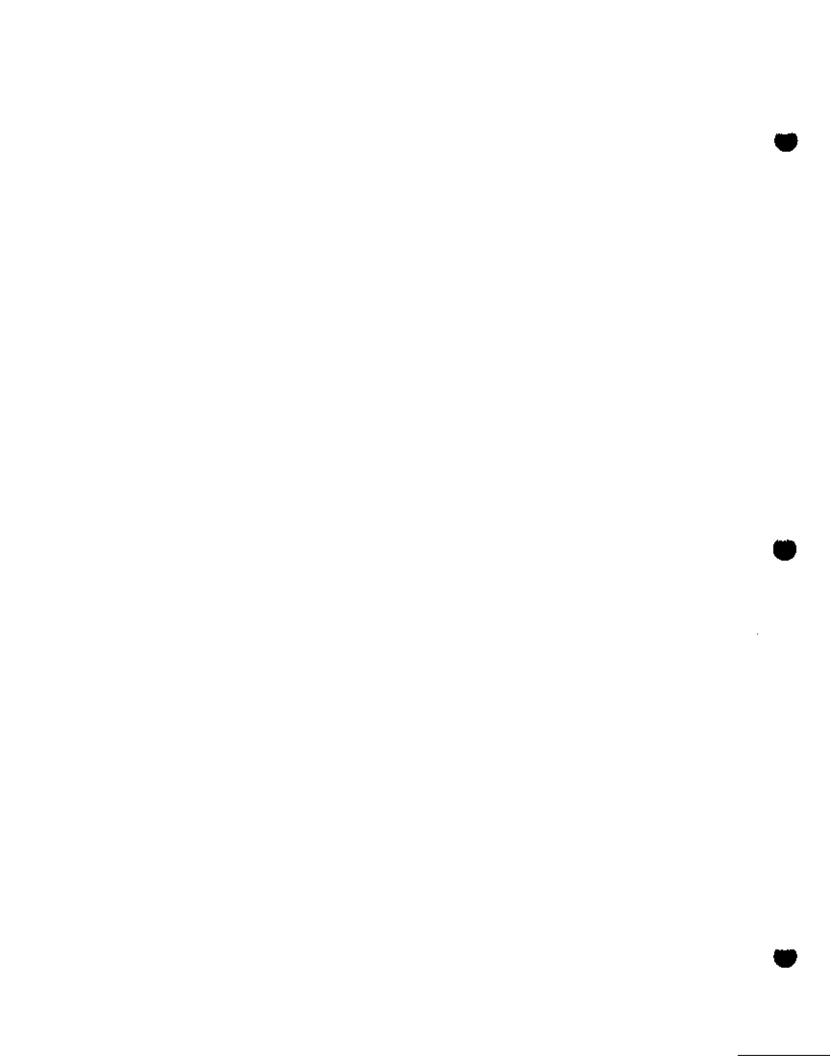
has not caused a release to the environment, any cleanup of subsequent site contamination caused by that system will not be eligible for DERA funds.

- e. <u>Base Realignment and Closure</u>. Used only when UST projects are related to the closure or realignment of an installation.
- f. <u>Japanese Facility Improvement Program</u>. Used only at Japanese installations when a UST action is related to a project approved by Japanese officials with the purpose of improving conditions for local citizens.
- 2. <u>Primary Funding Categories for Release Detection and Maintenance</u>. Release detection and regular maintenance is an ongoing compliance requirement for new and existing tank systems. Installation funding requests to address these requirements will compete with all other similar requests. Therefore, to ensure that adequate funds are available, each installation should budget needed funds locally.
- 3. Primary Funding Categories for Release Response. Anticipated studies such as site characterization for closing UST's should be budgeted for during development of the removal/replacement projects. Initial response abatement and free product removal actions are viewed as similar to emergency response. Therefore, resultant costs of these actions must be absorbed by local installation operating funds. Response to spills and releases of DFSC-owned fuel which occur after October 1992 may be funded by DFSC on a reimbursable basis.

18204. COMPLIANCE WITH UNDERGROUND STORAGE TANK (UST) CLOSURE DOCUMENTATION

- 1. The Marine Corps has permanently closed many UST's to date and will continue to do so in order to meet regulatory requirements and eliminate unneeded storage capacity. Proper documentation of UST removals and in-place closures is very important to ensure compliance, reduce environmental liability, avoid duplicative effort, and show progress and due diligence.
- 2. Marine Corps installations must record and maintain specific, detailed information for every UST taken out of service. Such information should be organized into a written UST closure report. Appendix G-4 outlines a typical UST closure report.

- a. Release Reporting Requirements. Marine Corps personnel must contain and clean up all spills or leaks of any size. Marine Corps personnel must report within 24 hours all confirmed or suspected leaks based on monitoring, or spills and overfills of petroleum exceeding 25 gallons, to the EPA or proper state agency. Such releases must also be reported to the CMC (LF). Utilize the message format provided in appendix E.
- b. <u>Release Investigation and Confirmation</u>. Immediate investigation should be initiated using the following methods (or others specified by the state or the EPA):
- (1) Perform inventory control for an additional month (if inventory reconciliation is the reason for suspecting a leak).
- (2) If a leak is still suspected, tank/pipe isolated tightness tests must be used to locate the leak.
- (3) If the UST system fails a tightness test or if environmental monitoring was the original reason to suspect a release, personnel must perform a site check.
- (4) Upon release confirmation, report this information to the appropriate regulatory agencies and proceed with release response and corrective action as outlined in 40 CFR 280.60 through 40 CFR 280.67, or equivalent state regulations.
- c. Small leaks or spills can sometimes be cleaned up without removing the tank or pipeline. In many cases, loose joints and connections cause leaks while the general condition of the tank or pipeline is good. In such cases, the tank or pipeline can be repaired per 40 CFR 280.33 and returned to service.



CHAPTER 18

UNDERGROUND STORAGE TANKS

SECTION 3: RESPONSIBILITIES

18300, <u>CMC</u> (LF)

- 1. Provide information and advice to installation commanders regarding proposed and final rules and regulations pertaining to UST's and uniformly apply Marine Corps policy as set forth in the Manual.
- 2. Monitor installation compliance with upcoming UST upgrade requirements.
- 3. Assist installations in resolving disputes with Federal, state, local, and foreign regulatory agencies as required.
- 4. Conduct special environmental compliance and protection studies with regard to UST's to assist in establishing policy or initiating actions.
- 5. Ensure, through field visits and the Environmental Compliance Evaluation Program, Marine Corps cooperation and compliance with Federal, state, and local regulatory agencies with regard to UST regulations.

18301. <u>CG/CO OF MARINE CORPS INSTALLATIONS AND COMMANDER MARINE</u> FORCES RESERVE (COMMARFORRES)

- 1. Identify and submit to the CMC (LFL) and the CMC (LFF) project documentation and funding requests for UST systems that are required to maintain compliance with applicable existing and emerging regulations and permits. Program and budget for personnel, equipment, materials, training, and monitoring required to comply with UST requirements.
- 2. Ensure that all required Federal, state, and local permits are applied for and obtained. Sign certifications and permit applications, as required, for construction of all UST projects. Pay appropriate Federal, state, and local fees.

- 3. Ensure that notification forms for UST's are completed and forwarded to the EPA or the appropriate state agency. Ensure that an accurate UST inventory is maintained.
- 4. Ensure that the environmental management hierarchy is employed, pollution prevention alternatives evaluated, and life-cycle cost impacts assessed, in evaluating and selecting projects that address compliance requirements (see chapter 15).
- 5. Accomplish leak detection and product inventory requirements, recordkeeping, and operation of monitoring systems required by Federal, and applicable state, and local UST laws and regulations.
- 6. Comply with Federal, and applicable state, and local laws and regulations concerning the construction of new UST's, the upgrading of existing tanks, and the removal and closure of abandoned/unneeded tanks.
- 7. Identify resources required to meet the UST requirements in the Program Objective Memorandum, budget submittals, and the Annual Operational Plan.
- 8. Develop and implement a comprehensive, written UST management plan to facilitate compliance, and to reduce long-term costs associated with compliance.
- 9. When necessary, request technical assistance for UST management from the Naval Facilities Engineering Command Engineering Field Divisions/Activities or other available agencies for leak detection assistance, design assistance for new UST's, and estimation of resource requirements for corrective actions.
- 10. Ensure that coordination occurs as appropriate with the Safety Office in matters relating to UST cleaning and removals.
- 11. Ensure that a base or station order is written to implement specifications set forth in this chapter. This requirement can be accomplished either by writing an environmental compliance and protection standard operating procedures document to implement all environmental requirements or by writing a separate base order to implement specifications of this chapter alone.

CHAPTER 19 POLYCHLORINATED BIPHENYLS MANAGEMENT

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CHAPTER 19

POLYCHLORINATED BIPHENYLS MANAGEMENT

SECTION 1: INTRODUCTION

19100. <u>PURPOSE</u>. This chapter establishes Marine Corps policy and responsibilities for compliance with requirements under the Toxic Substances Control Act (TSCA) for managing PCB's. Although this chapter deals primarily with the management of PCB's, it recognizes that occupational safety and health policies and regulations must be integrated into the management of PCB's to attain an effective program.

- 19101. APPLICABILITY. See paragraph 1101.
- 19102. BACKGROUND. Except as authorized in 40 CFR 761.30, the Environmental Protection Agency (EPA) regulations ban the use of PCB's in any manner not totally enclosed. Regulations also prohibit PCB manufacturing, processing, importation, and distribution in commerce except for disposal. Although the manufacturing of new equipment using PCB's is prohibited, the regulations allow for the continued use of some PCB-containing equipment already in service through the end of its useful life, unless otherwise prohibited. Useful life is generally interpreted to be until equipment failure.
- 1. PCB's are also recognized as hazardous substances (HS) under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) for purposes of spill reporting.
- 2. The regulations at 40 CFR part 761. establish specific definitions for many terms (see paragraph 19105, Terms and Definitions.)

19103. FEDERAL STATUTES

1. TSCA of 1976 (15 U.S.C. 2601 et seg.). This Act requires the EPA to regulate and control harmful chemical and toxic substances in commercial use. Congress enacted TSCA to reduce unreasonable risks from chemicals to human health, safety, and the environment. Section 6 of TSCA provides the EPA with the

authority to regulate hazardous chemical substances and mixtures. Regulations on the manufacturing, processing, distribution in commerce, and use of PCB's are found in 40 CFR 761. The EPA promulgated additional regulations on the storage and disposal of PCB's on December 21, 1989.

2. Resource Conservation and Recovery Act (RCRA) of 1976 (42 U.S.C. 6901 et seg.). RCRA was enacted as an amendment to the Solid Waste Disposal Act. RCRA has been amended by several public laws, including the Hazardous and Solid Waste Amendments (HSWA). The HSWA requirements include the prohibition on land disposal of hazardous wastes (HW) containing PCB's (for liquids with concentrations greater than 50 parts per million (ppm) and for nonliquids with concentrations of PCB's greater than 1,000 ppm).

19104. REQUIREMENTS

- 1. <u>Use/Reuse</u>. PCB's at any concentration may be used in transformers (other than railroad) and for purposes of servicing, including rebuilding these transformers for the remainder of their useful lives (40 CFR 761.30). The following requirements are applicable to the use and reuse of PCB's:
- Marine Corps installations must not use or store for reuse large PCB capacitors, PCB transformers, or electromagnets that pose an exposure risk to human food or animal feed. Exposure risk exists if PCB's released in any way have a potential pathway to human food or animal feed. For PCB. capacitors, if there is no exposure risk, use these capacitors only within a restricted-access electrical substation or a restricted-access indoor installation. At least every 3 months, visually inspect for leaks all PCB transformers or electromagnets in use, or in storage for reuse. Initiate cleanup and repair of leaks within 48 hours of discovery. Daily inspect all leaking PCB transformers until the leak has been repaired. In situations where transformers have 100 percent secondary spill containment. or have been serviced for purposes of reducing the PCB concentration and contain less than 60,000 ppm PCB's, visual inspections may be reduced to once every 12 months (40 CFR 761.30).
- b. As of October 1, 1990, installations may no longer use network PCB transformers with secondary voltages equal to or greater than 480 volts, including 480/277 volt systems in, or near, commercial buildings. Such PCB transformers must be

converted to either PCB-contaminated or non-PCB status by retrofilling or by removal and replacement.

- c. As of October 1, 1990, all radial PCB transformers and lower secondary voltage network PCB transformers (i.e., secondary voltages below 480 volts) used in, or near, commercial buildings must be equipped with electrical protection to avoid transformer failures caused by high-current faults. In addition to this protection, all radial PCB transformers with higher secondary voltages (i.e., 480 volts and above, including 480/277 volt systems) used in, or near, commercial buildings must have electrical protection to avoid transformer failures caused by sustained low-current faults. Radial transformers that are not provided with electrical protection must have been removed from service by October 1, 1990. Lower secondary voltage network transformers (described above) that are not provided with electrical protection must have been removed from service by October 1, 1993.
- d. It is prohibited to install PCB transformers which have been placed into storage for reuse or which have been removed from another location in or near commercial buildings.
- e. Installations must register all PCB transformers (including pole-mounted PCB transformers and those stored for reuse) with any fire department on-base or off-base able to respond to a fire.

2. Markings

- a. Per 40 CFR 761, 40, mark as illustrated in figure 19-1, the following PCB items in existence on or after July 1, 1978:
- (1) All PCB transformers and PCB Large High Voltage Capacitors (LHVC) in use or removed from use;
- (2) Electric motors using PCB coolants, hydraulic systems, and heat transfer systems containing PCB's of 50 ppm or greater;
- (3) PCB Large Low Voltage Capacitors (LLVC) when they are removed from service;
 - (4) PCB article containers;
- (5) Each storage area used to store PCB's and PCB items; and

- (6) PCB transformer locations.
- b. Mark PCB storage areas and transport vehicles with special labels in accordance with 40 CFR 761.40, and the Department of Transportation's hazardous material transportation regulations.
- c. Mark the date when PCB liquids, PCB containers, nonliquid PCB's, and PCB items are removed from service and placed in the storage facility.
- d. If one or more PCB LHVC's are installed in a protection location such as on a power pole, structure, or behind a fence, the pole, structure, or fence, mark as illustrated in figure 19-1.

3. Storage

- a. Per the requirements in 40 CFR 761.65, the following storage requirements apply to PCB's at concentrations of 50 ppm or greater and PCB items with PCB concentrations of 50 ppm or greater:
- (1) The storage facility must have adequate roof and walls to prevent rainwater from reaching the stored PCB's and PCB items.
- (2) The facility must have an adequate floor with a continuous 6-inch high curb.
- (3) The facility cannot have drain valves, floor drains, expansion joints, sewer lines, or other openings that would permit liquids to flow from the curbed area.
- (4) The facility cannot be located at a site that is below the 100-year flood water elevation.
- b. Nonleaking PCB items or leaking PCB items placed in nonleaking containers with absorbent may be put into temporary storage facilities (those not meeting the requirements of a permanent facility) for up to 30 days (consult with state and local laws and regulations applicable to PCB item storage, as some allow longer storage times for certain PCB items). Containers with nonliquid PCB-contaminated soil, rags, or debris from spills and PCB containers with 50 to 500 ppm liquid PCB (as determined by a laboratory) may also be stored in temporary facilities. However, the EPA requires that the date of removal

from service be attached to all items in temporary storage. A Spill Prevention Control and Countermeasures plan must be prepared for the temporary storage area if it is used to store containers holding between 50 and 500 ppm PCB-contaminated liquids. Any container used for the storage of PCB's and PCB items must meet the requirements of 40 CFR 761.65(c).

- C. In a permanent storage facility, store PCB transformers. PCB liquids, PCB containers, nonliquid PCB's, and PCB items (if they are to be stored for more than 30 days while awaiting disposal). PCB items may be stored for up to 1 year (or less if required by HW regulations) in a permanent PCB storage facility, provided it meets the applicable, minimum criteria as specified in 40 CFR 761.65.
- d. Installations must not store combustible materials within 5 meters of any PCB transformer or its enclosure.
- 4. <u>Transportation</u>. PCB's must be transported as specified in 49 CFR 171-177.

5. Disposal

- a. Dispose of PCB's and PCB items with concentrations of $50\,$ ppm or greater within 1 year of the date that storage began.
- b. For PCB fluids containing more than 500 ppm of PCB's, disposal is generally via high-temperature incinerators permitted by the EPA. PCB-contaminated mineral oil (less than 500 ppm PCB) may be burned in high-efficiency boilers, provided that specific EPA requirements are met, and EPA and appropriate state and local approval is obtained. If landfills, approved by the EPA for PCB disposal, may be used for disposal of specific PCB items such as transformers, large capacitors, and debris from PCB spills (40 CFR 761.60). PCB transformers must be emptied of fluid and rinsed with appropriate solvent before they can be landfilled.

Emergency Response and Reporting

a. Immediately report by telephone to the National Response Center (NRC) fire-related incidents involving PCB transformers ((800) 424-8802). The owner of the PCB transformer also must take measures to contain and control any potential releases of PCB's and incomplete combustion products into water. Fires involving PCB's can generate extremely toxic reaction products (e.g., dioxins). Immediately evacuate a building in which a PCB fire occurs.

- b. PCB's are an HS under TSCA and CERCLA, requiring spills to be reported as follows: A spill of a reportable quantity (RQ) of PCB (RQ = 1 lb) or greater must be reported to the appropriate response organizations and regulatory agencies within the required deadlines (see chapter 7 and appendix E of this Manual). Releases of a mixture containing PCB's must be reported only when the amount of the PCB component released exceeds the RQ. If the concentration of PCB's in the mixture is unknown, the release must be reported if the total amount of the mixture spilled is 1 pound (1b) or more (see 40 CFR 761.125).
- 7. Notification of PCB Waste Activity. Installations that generate PCB wastes must notify the EPA and obtain an EPA identification number for PCB waste generators. It is illegal for a PCB waste generator to process, store, dispose of, transport, or offer transportation for PCB wastes without having obtained an EPA identification number. PCB generators must notify the EPA of such activities by filing EPA Form 7710-53 (40 CFR 761.202). Generators that do not store PCB's or PCB items for over 30 days and that do not operate a PCB storage facility subject to the requirements of 40 CFR 761.65(b), or 40 CFR 761.65(c)(7), are exempted from notifying the EPA. Exempt generators must use the generic identification number "40 CFR 761" or a number assigned to the activity by the EPA or a state under RCRA.
- 8. <u>PCB Recordkeeping</u>. The EPA requires that the following records be kept as applicable:
- a. Records of inspections, maintenance, and repairs of PCB transformers and electromagnets in use, or stored for reuse, must be maintained at the installation at least 3 years after disposal of the PCB transformer or electromagnet.
- b. Each owner or operator of a facility using or storing at any one time at least 45 kg (99.4 lb) of PCB's in PCB containers, 1 or more PCB transformers, or 50 or more large PCB capacitors must maintain annual records and a written annual document log of PCB waste disposal activities. These records and the log must be retained for 3 years after the facility ceases using or storing PCB's and PCB items in quantities described above. The document log must be completed by July 1 for the previous calendar year. Annual records must include all signed manifests for the calendar year and all certificates of disposal.
- c. The written document log must contain the following specific inventory information for each type of PCB item:

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- (1) Name, address, and EPA identification number of the facility and the calendar year covered by the annual document log;
- (2) Manifest number of every manifest generated by the facility during the calendar year;
- (3) Total number by specific type of PCB articles, PCB article containers, PCB containers, PCB transformers, and any PCB's and PCB items in PCB containers; and
- (4) Total weight in kilograms of PCB's in PCB article containers and PCB transformers, total weight in kilograms of contents of PCB containers, PCB article containers, and total weight of LHVC or LLVC PCB capacitors remaining in service at the facility at the end of the calendar year.
- d. A record of each telephone call or some form of verification must be kept to confirm receipt of PCB's transported by an independent transporter.
- e. <u>Manifesting PCB Wastes</u>. A generator who relinquishes control over PCB wastes for commercial off-site disposal must prepare a manifest using EPA Form 8700-22, or the appropriate state manifest. If the generator uses an independent transporter to ship the waste and the generator does not receive a signed copy of the manifest from the disposer or commercial storer within 35 days of shipment, then the generator will contact the transporter and/or disposer to determine the disposition of the waste. If the generator does not receive a manifest from the disposal facility within 45 days of shipment, then the generator must file an exception report with the EPA regional office. Copies of the manifests must be retained by the generator for at least 3 years after the facility ceases using or storing PCB's or PCB items (40 CFR 761.207).
- f. <u>Certificates of Disposal and One-Year Exception Reports</u>. For each shipment of manifested PCB waste, the disposer is obligated to propare a certificate of disposal that must be sent to the generator within 30 days of the date of disposal (40 CFR 761.218). A generator who manifests PCB's or PCB items to a disposer of PCB waste must submit a One-Year Exception Report to the EPA regional administrator whenever the following criteria are met (40 CFR 761.215):

- (1) The generator has not received a certificate of disposal within 13 months from the date of removal from service; and
- (2) The generator receives a certificate of disposal for a disposal date more than 1 year after the date of removal from service.
- 9. <u>Environmental Compliance</u>. See chapter 4 of this Manual for information on policy, responsibility, and procedures for achieving compliance with applicable Executive Orders, and Federal, state, interstate, and regional statutory and regulatory environmental requirements.

19105. TERMS AND DEFINITIONS

- <u>Capacitor</u>. A device for accumulating and holding a charge of electricity and consisting of conducting surfaces separated by a dielectric. Types of capacitors are as follows:
- a. <u>LHVC</u>. A capacitor that contains 1.36 kg (3 lbs) or more of dielectric fluid and that prates at 2,000 volts (AC or DC) or above.
- b. <u>LLVC</u>. A capacitor that contains 1.36 kg (3 lbs) or more f dielectric fluid and that operates below 2,000 volts (AC or LC).
- c. <u>Small Capacitor</u>. A capacitor that contains less than 1.36 kg (3 lbs) of dielectric fluid.
- 2. <u>EPA Identification Number</u>. The number assigned by the EPA to each generator, transporter, and treatment storage or disposal facility.
- 3. <u>In or Near Commercial Buildings</u>. Within the interior of, on the roof of, attached to the exterior wall of, in an adjacent parking area serving, or within 30 meters of a nonindustrial, nonsubstation building.
- 4. <u>Non-PCB Transformer</u>. Any transformer that contains less than 50 ppm PCB, except that any transformer that has been converted from a PCB transformer or a PCB-contaminated transformer, cannot be classified as a non-PCB transformer until reclassification has occurred per the requirements of 40 CFR 761.30.

- 5. PCB. Any chemical substance that is limited to the biphenyl molecule that has been chlorinated to varying degrees, or any combination of substances that contains such substance. Prior to stringent regulation of PCB's, they were used in a variety of applications as a fire retardant. PCB's were also used for other purposes, such as a component of sound insulating felt in submarines and electrical cables. Often, PCB's were added in these applications without being specified in material or equipment procurement specifications. Thus, the presence of PCB's cannot always be determined through review of applicable procurement documents. In the disposal of materials and components, care should be taken to identify all potentially HS's and carry out the disposal accordingly.
- 6. <u>PCB Article</u>. Any manufactured article, other than a PCB container, that contains PCB's and whose surface(s) have been in direct contact with PCB's. This includes capacitors, transformers, electric motors, pumps, pipes, and any other manufactured items.
- 7. <u>PCB Article Container</u>. Any package, can, bottle, bag, barrel, drum, tank, or other device used to contain PCB articles or PCB equipment, and whose surface(s) has not been in direct contact with PCB's.
- 8. <u>PCB Container</u>. Any package, can, bottle, bag, barrel, drum, tank, or other device that contains PCB's or PCB articles and whose surface(s) have been in direct contact with PCB's.
- 9. <u>PCB-Contaminated Electrical Equipment</u>. Any electrical equipment (e.g., transformers, capacitors, circuit breakers, reclosers, voltage regulators, switches, electromagnets, and cable), containers, materials, soils, or other items that contain 50 ppm or greater PCB, but less than 500 ppm PCB.
- 10. <u>PCB-Contaminated Transformer</u>. Any transformer that contains 50 ppm or greater PCB, but less than 500 ppm PCB.
- 11. <u>PCB Equipment</u>. Any manufactured item, other than a PCB container, or a PCB article container which contains a PCB article or other PCB equipment. This includes microwave ovens, electronic equipment, and fluorescent light ballasts and fixtures.
- 12. <u>PCB Item</u>. Any PCB article, PCB article container, PCB container, or PCB equipment that deliberately or unintentionally contains any PCB or PCB's.

- 13. <u>PCB Leak</u>. Any instance in which a PCB article, PCB container, or PCB equipment has any PCB's on any portion of its external surface.
- 14. $\underline{\text{PCB Transformer}}$. Any transformer that contains 500 ppm or greater of PCB.
- 15. <u>PCB Waste Generator</u>. Any person whose act or process produces PCB's that are regulated for disposal or whose act first causes PCB's or PCB jtems to become subject to disposal requirements, or who has physical control over the PCB's when a decision is made that the use of the PCB's has been terminated.
- 16. Retrofill. To remove PCB or PCB contaminated dielectric fluid and to replace it with either PCB. PCB contaminated, or non-PCB dielectric fluid.

CHAPTER 19

POLYCHLORINATED BIPHENYL MANAGEMENT

SECTION 2: MARINE CORPS POLICY

- 19200. <u>GENERAL</u>. Marine Corps installations must comply with all applicable Federal, state, and local regulatory requirements relating to PCB management.
- 19201. MARINE CORPS POLYCHLORINATED BIPHENYL (PCB) ANNUAL INVENTORY REPORT. All Marine Corps installations that have PCB items still in use, or generate, store, treat, or dispose of PCB's must prepare an annual report of all PCB's and PCB items on the installation and those sent off-site for disposal during the past year. This report will be submitted to Naval Facilities Engineering Service Center (NFESC) per their guidance, with a copy to the cognizant Naval Facilities Engineering Command Engineering Field Division/Activity and the CMC (LF).
- 19202. MARINE CORPS AND DEFENSE LOGISTICS AGENCY (DLA) INTERFACE ON POLYCHLORINATED BIPHENYLS (PCB). The DLA must accept accountability for storage and disposal of PCB's and PCB items. The DLA must also accept custody where the Defense Reutilization and Marketing Office (DRMO) has conforming storage.
- 19203. POLYCHLORINATED BIPHENYL (PCB) TRANSFORMERS IN COMMERCIAL BUILDINGS. PCB transformers in commercial buildings must be registered with building host owners. Host installations will inform tenants as to the location and type of any PCB transformers in or near all buildings they occupy. Marine Corps policy is to treat Marine Corps, military, or civilian personnel assembly buildings, educational properties, institutional properties (including museums, hospitals, clinics), residential properties (living quarters), stores, office buildings (including administrative buildings), and transportation centers (including airport terminal buildings, bus stations, or train stations) as commercial buildings.

19204. <u>POLYCHLORINATED BIPHENYL (PCB) EQUIPMENT REMOVAL POLICY</u>. The Marine Corps policy is to eliminate PCB's from all Marine Corps-owned electrical distribution systems and equipment hydraulic fluids and cooling and lubricating oils using the following procedures.

Transformers

- a Determine by gas chromatography or another appropriate method the PCB concentration for all pad-mounted and pole-mounted transformers. Mark transformers in accordance with Federal, state, and/or local requirements. Note PCB test results (in ppm) for each transformer in the installation records.
- b. By October 1998, eliminate all transformers containing 500 ppm or more PCB's. By October 2003, eliminate all transformers containing 50 ppm or more PCB's. To reduce future potential liabilities, accomplish transformer elimination by replacement, or by removal with load transfer to other non-PCB transformers.

Capacitors

- a. Establish an accurate i. tory of PCB capacitors based on manufacturing information. Label large PCB capacitors and large non-PCB capacitors in accordance with Federal, state, and/or local requirements. Note the PCB classification of each large capacitor in installation records.
 - b. By October 1998, eliminate all large PCB capacitors.
- 3. <u>Elimination Plan</u>. Complete annual updates of the installation PCB elimination plan until all PCB's and PCB items have been removed from the installation. The plan must include the proposed date of removal and the requested source of funding for each PCB item. Transformer and capacitor owners must prioritize corrective projects based on: 1) the severity of mission impact if a fire, explosion, or major PCB spill occurred and 2) the likelihood of such an incident occurring. Transformer and capacitor owners must coordinate priorities with impacted customers, paying special attention to the redesign of the power grid that accommodates PCB removal. PCB elimination plans must be updated every October.
- 4. <u>Procurement</u>. All future procurement of transformers or any other equipment containing dielectric or hydraulic fluid must be accompanied by a manufacturer's certification that the equipment

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contains no detectable PCB's or that the equipment contains less than 2 ppm PCB's at time of shipment. Affix labels to such newly procured transformers and equipment stating that they are "Non-PCB" (i.e., no detectable levels of PCB present).

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ENVIRONMENTAL COMPLIANCE AND PROTECTION MANUAL

CHAPTER 19

POLYCHLORINATED BIPHENYL MANAGEMENT

SECTION 3: RESPONSIBILITIES

19300. <u>CMC</u>(LF)

- 1. Provide information and advice to installation commanders regarding proposed and final rules and regulations pertaining to PCB's and uniformly apply Marine Corps policy as set forth in this Manual.
- 2. Monitor the status of installation inventories and PCB management programs.
- 3. Assist installations in resolving disputes with Federal, state, local, and foreign regulatory agencies as required.
- 4. Conduct special environmental compliance and protection studies with regard to PCB's to assist in establishing policy or initiating actions.
- 5. Ensure, through field visits and the Environmental Compliance Evaluation Program, Marine Corps cooperation and compliance with Federal, state, and local regulatory agencies with regard to PCB regulations.
- 6. Track Marine Corps progress toward meeting established PCB elimination goals.

19301. <u>CG/CO OF MARINE CORPS INSTALLATIONS AND COMMANDER MARINE FORCES RESERVE (COMMARFORRES)</u>

1. Identify and submit to the CMC (LFL) and the CMC (LFF) project documentation and funding requests for PCB management facilities that are required to maintain compliance with applicable existing and emerging regulations and permits. Program and budget for personnel, equipment, materials, training, and monitoring required to comply with PCB management requirements. Pay appropriate Federal, state, and local fees. Ensure that the environmental management hierarchy is employed, pollution prevention alternatives evaluated, and life-cycle cost

impacts assessed, in evaluating and selecting projects that address compliance requirements (see chapter 15 of this Manual).

- 2. Ensure that all required Federal, state, and local permits are applied for and obtained. Sign certifications and permit applications, as required, for construction of all PCB management projects.
- 3. Designate an activity focal point to coordinate installation PCB management programs.
- 4. Determine, evaluate, and comply with applicable Federal, state, and local laws and regulations governing PCB management.
- 5. Submit and sign, as appropriate, PCB reports and other required data to the EPA, and state, and local agencies.
- 6. Budget and fund the operation and maintenance of facilities and equipment necessary to handle, store, transport, treat, and dispose of Marine Corps PCB's and PCB items in compliance with applicable Federal, state, and local requirements.
- 7. To the extent possible, transfer to the DRMO accountability and physical custody of PCB's and PCB items stored for disposal.
- 8. Complete the NFESC annual PCB inventory and forward to NFESC with a copy to the CMC (LF).
- 9. Report PCB spills or incidents involving combustion as prescribed in chapter 7 of this Manual when the spill exceeds the reportable quantities established in Federal regulations. Immediately report fire-related incidents involving PCB transformers to the NRC regardless of quantity.
- 10. Register all PCB transformers and equipment with cognizant fire departments.
- 11. Prepare and update the installation PCB elimination plan.
- 12. Ensure that coordination occurs as appropriate with the safety office in matters relating to PCB management.

CAUTION CONTAINS PCB's

(Polychlorinated Biphenyls)

A toxic environmental contaminant requiring special handling and disposal in accordance with US Environmental Protection Agency Regulations
40-CFR 761--For Disposal Information contact the nearest US EPA Office

In case of accident or spill call toll free the US
Coast Guard National Response
Center
800 424-8802
Also Contact
Tel No

Figure 19-1.--PCB Item Marking.

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CHAPTER 20 WATER QUALITY MANAGEMENT

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CHAPTER 20

WATER QUALITY MANAGEMENT

SECTION 1: INTRODUCTION

20100. <u>PURPOSE</u>. This chapter establishes Marine Corps policy and responsibilities for compliance with Federal water pollution control requirements for water quality management (WQM) programs. Chapter 16 of this Manual discusses specific provisions for preventing and controlling surface and groundwater pollution and for the protection of drinking water supplies. For information on the planning, prevention, and control of water pollution from oil discharges and hazardous substance (HS) releases, see chapter 7 of this Manual.

- 20101. APPLICABILITY. See paragraph 1101.
- 20102. <u>BACKGROUND</u>. Marine Corps operations that are regulated through the WQM program include the following:
- 1. Sanitary or industrial wastewater discharged directly to receiving waters or through an on-base Marine Corps Owned Treatment Works (MCOTW).
- 2. Sanitary or industrial wastewater discharged to an off-base POTW or to a treatment plant of another DoD activity.
- 3. Stormwater runoff associated with industrial or construction activities discharged to receiving waters.
- 4. Range operations which result in nonpoint source pollution.
- 5. Agricultural, silvicultural, and grazing operations, including outleases, which contribute to polluted runoff or groundwater contamination.
- Sewage sludge generation, processing, use, and disposal practices.
- 7. Facilities involved in the transfer, storage, and transportation of petroleum, oil, and lubricants (POL) which, because of their location, could reasonably be expected to cause

substantial harm to the environment by discharging into navigable waters or on the adjacent shoreline.

8. Hazardous material storage areas and other regulated storage areas where runoff is likely to occur.

20103. FEDERAL STATUTES

- 1. <u>Water Ouality Act (WOA) of 1965 (Public Law 89-234), Water Ouality Improvement Act of 1970 (Public Law 91-224), Federal Water Pollution Control Act (FWPCA) of 1972, as Amended by Clean Water Act (CWA) of 1977 (33 U.S.C. 1251 et seg.)</u>
- The WQA provides Federal assistance for the establishment and enforcement of jurisdictional water quality standards for surface waters. It was amended in 1970 by the Water Quality Improvement Act to prohibit releases of oil and sewage into navigable waters. The FWPCA made the Environmental Protection Agency (EPA) responsible for setting nationwide effluent standards on an industry-by-industry basis. This Act provided effluent and water quality standards, and instituted a permit system for the regulation of oxygen-demanding pollutant discharges. In 1977, the CWA Amendments refocused the enforcement tools of the FWPCA on the control of toxics. amended the permit system, which is now the National Pollutant Discharge Elimination System (NPDES), a nationwide permit program administered by the EPA. The CWA was amended in 1987 to include the regulation of stormwater runoff, and to strengthen enforcement mechanisms. The intent of the CWA is to restore and protect the integrity of the Nation's waters by controlling discharges of pollutants, including oil and hazardous substance spills, into those waters.
 - b. The CWA identifies the following two national goals:
- (1) To eliminate the introduction of pollutants into waters of the United States; and
- (2) To develop water quality which protects and propagates fish, shellfish, and wildlife and provides for recreation in and on the water.
- c. To attain these goals, the EPA has identified conventional, nonconventional, and toxic pollutants and the degrees of technology that must be applied to remove these pollutants from point and nonpoint sources of wastewater. Point

source discharge requirements are implemented through the NPDES, or through state programs that have been authorized by the EPA. Nonpoint source discharges are regulated through state WQM programs. The CWA also authorizes the EPA to promulgate pretreatment standards for industrial sources discharging effluents to POTW's.

- d. Important statutory requirements of the CWA are summarized as follows:
- (1) Section 208 requires the preparation of area-wide waste treatment management plans. These plans must contain alternatives for waste treatment management and must apply to all wastes generated within the area involved.
- (2) Section 301 provides that the discharge of any pollutant by any person (including Federal installations) into waters of the United States is unlawful without a discharge permit and adherence to any permit requirements.
- (3) Section 302 establishes requirements for the development of water quality related effluent limitations. These limits are calculated for a particular section of a receiving water and applied to one or more point sources by inclusion in an NPDES permit. These limits are more stringent than general water quality standards or categorical industry effluent limits.
- (4) Section 303 requires states to develop and revise water quality standards and implementation plans for interstate and intrastate waters. These standards are used to determine effluent discharge limits in NPDES permits.
- (5) Section 304(1) requires states to develop a list of impaired waters due to point source discharges of toxic pollutants and a determination of which point sources are responsible for the discharges. This section requires the imposition of an Individual Control Strategy for the toxic pollutant(s) within the NPDES permit in order to reduce the concentration of the toxic pollutant(s), which would enable the receiving water to meet its designated water quality standard.
- (6) Section 306 requires the development of National Standards of Performance for new and existing sources of industrial wastewater from specified industrial categories. Categories relevant to Marine Corps operations include electroplating, metal finishing, metal products and machinery.

landfill leachate and incinerators, waste treatment, transportation equipment cleaning, and industrial laundries.

- (7) Section 307 establishes a list of toxic pollutants and requires the development of effluent and pretreatment standards for those pollutants.
- (8) Section 308 establishes the EPA's right to enter and inspect any facility subject to the CWA provisions. It also specifies requirements for permittees to monitor discharges and to establish and maintain appropriate records and reports.
- (9) Section 309 provides for Federal enforcement of the CWA, to include filing of Notices of Violation, issuing compliance orders, and bringing civil suits in United States District Courts against violators. This section also specifies criminal penalties of up to \$25,000 per day and/or 1 year imprisonment for negligent violations; up to \$50,000 per day and/or 3 years imprisonment for knowing violations; and up to \$250,000 per day and/or 15 years imprisonment for an individual or up to \$1,000,000 for an organization that knowingly endangers human life or causes serious bodily injury. Until a complete sovereign immunity waiver similar to that contained in the Federal Facilities Compliance Act (FFCA) is placed into the CWA by Congress, Marine Corps policy specifies that penalties levied under the CWA will not be paid.
- (10) Section 311 addresses oil and HS liability. It requires the development of a National Oil and Hazardous Substances Pollution Contingency Plan (NCP). The NCP provides the organizational structure and procedures for preparing for, and responding to, oil discharges and releases of HS's, contaminants, and pollutants. This section further provides that the President (and installation commanders as duly appointed representatives) act on behalf of the United States to recover all costs for restoring or replacing natural resources damaged by such discharges and releases.
- (11) Section 313(a) states that Federal agencies, their facilities, and personnel are subject to, and must comply with, all Federal, state, and local requirements, administrative authority, process, and sanctions respecting the control and abatement of water pollution. It exempts Federal personnel from personal liability for civil penalties arising from performing official duties and limits the liability of the United States to only "civil penalties arising under Federal law or imposed by a state or local court to enforce an order or the process of such

- court." The President may exempt any effluent source of any Federal installation from CWA compliance if he determines it is in the express interest of the United States to do so; however, no exemption may be granted from requirements promulgated for categorical industries under section 306 and toxic pollutants under section 307.
- (12) Section 319 requires states to establish nonpoint source (NPS) pollution management programs. These management programs must identify the best management practices (BMP) for reducing specific types of NPS pollution, identifying programs to implement the BMP's, developing a schedule with annual milestones for implementing the BMP's, certifying that the state has adequate legal authority for administering and enforcing the program, and identifying sources of assistance and funding.
- (13) Section 401 requires that any applicant for a Federal license or permit to conduct an activity that may result in a discharge to navigable waters must provide to the permitting agency a certification from the state in which the discharge will originate that any such discharges will comply with applicable CWA provisions. The applicant must provide an opportunity for the certifying state or agency to review the manner in which the facility will operate to ensure that effluent limits will not be violated.
 - (14) Section 402 establishes the NPDES permit program.
 - (15) Section 403 establishes ocean discharge criteria.
- (16) Section 404 establishes requirements for the issuance of permits by the Army Corps of Engineers (COE) for discharges of dredged or fill material into navigable waters.
- (17) Section 504 provides authority to the EPA to bring suit in United States District Courts to immediately restrain any person (including Federal facilities) from causing or contributing to a discharge alleged to imminently and substantially endanger human health or welfare.
- (18) Section 505 provides for citizen suits against any person (including the United States) who allegedly is violating an effluent standard or an order issued by the EPA or a state with respect to such a standard or limitation.

2. Oil Pollution Act (OPA) of 1990 (Public Law 101-380, 33 U.S.C. 2701 et seq.)

- a. This Act prohibits harmful discharges of oil and HS's into waters of the United States or discharges which may affect natural resources owned or managed by the United States.
- b. The OPA requires owners or operators of tank vessels and facilities to develop and submit appropriate facility response plans (see chapter 7 of this Manual) because their locations might cause substantial harm by discharging oil or HS's into the environment.

3. <u>Safe Drinking Water Act (SDWA) of 1974 (42 U.S.C. 300(f) et seg.</u>)

- a. This Act and its amendments prescribe treatment and distribution control strategies for abating the contamination of drinking water. For more information on drinking water systems and conservation, refer to chapter 16 of this Manual.
- b. Part C of the SDWA prescribes the protection of underground sources of drinking water. It establishes three groundwater protection programs for which the states should assume the primary responsibility. These programs are:
- (1) The Underground Injection Control (UIC) Program. The purpose of this program is to regulate the injection of fluids into underground strata which could affect groundwater supplies.
- (2) The Sole Source Aguifer Program. The purpose of this program is to designate and protect aquifers which are the sole or principal source of drinking water for an area and which, it contaminated, would create a significant hazard to public health.
- (3) The Wellhead Protection (WHP) Program. The purpose of this program is for states to protect wellhead areas from contaminants which may have an adverse effect on the health of persons using wells for drinking water within that area.
- 4. Rivers and Harbors Act of 1899 (33 U.S.C. 407 et seg.). Sections 9 and 10 of this Act provide authority to the COE to issue or deny permits for construction of dams, dikes, or other structures in, or ones that will affect, navigable waters of the United States.

5. Marine Protection, Research, and Sanctuaries Act (MPRSA) of 1972, as Amended (33 U.S.C. 1401 et seg. and 16 U.S.C. 1431 et seg.)

- a. This Act, also known as the Ocean Dumping Act, restricts the dumping of all types of materials which would adversely affect human health and welfare or the marine environment, originating from within and outside the United States, into ocean waters. It further prohibits ocean disposal of biological, chemical, and radiological warfare agents, high level radioactive waste, and medical waste.
- b. The Act establishes a system for the issuance of permits by the EPA, under section 102, and by the COE, under section 103, for ocean disposal of dredged materials. Section 104 contains conditions for permits issued by the EPA and the COE. Section 104B of the MPRSA banned ocean disposal of sewage sludge or industrial waste after December 31, 1991.

6. CZMA of 1972 (16 U.S.C. 1451 et seg.)

- a. This Act plays a significant role in water quality management, particularly with regard to nonpoint source pollution. State coastal zone management programs approved under the Act incorporate flood control, sediment control, grading control, and stormwater runoff control statutes. Under the CZMA, a Federal action that affects any land, water use, or natural resource of the coastal zone must be accomplished as consistently as possible with the enforceable policies of the approved state management programs (15 CFR 930.32). This requirement applies to activities conducted both within or outside the coastal zone if there are impacts in the coastal zone.
- b. These state programs must be considered when addressing water pollution impacts of Marine Corps projects. Assistance in determining compliance requirements in specific situations may be requested from the CMC (LF).
- c. In their coastal zone management program, states must list activities which directly affect the coastal zone and, therefore, require a consistency determination. Installations should review this list to identify activities applicable to their installation which are likely to require a consistency determination.

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7. Resource Conservation and Recovery Act (RCRA) of 1976 (42 U.S.C. 6901 et seg.)

- a. This Act prescribes technical requirements for preventing leachate migration from solid or hazardous waste (HW) disposal sites to groundwater.
- b. Section 3023, as implemented under the FFCA, defines and regulates FOTW's, which include Marine Corps domestic wastewater treatment plants. This section prohibits introducing any HW into an FOTW, specifies conditions under which an FOTW without a RCRA permit may receive industrial wastewaters, and discusses enforcement procedures.
- c. Section 7003 provides authority to the EPA to bring suit in United States District Court to immediately restrain any person (including Federal facilities) from causing or contributing to a discharge alleged to imminently and substantially endanger human health or the environment.

20104. REQUIREMENTS

1. General

a. <u>Statutory Requirements</u>. The CWA requires compliance by Foderal installations with all requirements, substantive and procedural, that are applicable to the control and abatement of water pollution. The CWA makes it illegal for any Marine Corps installation to discharge any pollutant, other than when such discharge is in compliance with effluent standards, treatment technology requirements, or other procedural requirements.

b. Regulatory Requirements

- (1) Applicable requirements include Federal, state, and local regulations. The remainder of this section summarizes many of the significant Federal regulations pertaining to water quality management.
- (2) Authorized EPA, state, or other regulatory officials who have presented proper credentials must be allowed to enter Marine Corps facilities at reasonable times to examine or copy records, inspect facilities and monitor equipment, and sample any wastewater or stormwater which the activity is required to monitor. Designated representatives of the CG/CO should accompany the officials during these site visits.

- C. Executive Order (EO) Requirements. EO 12088, Federal Compliance with Pollution Control Standards, October 13, 1978, requires executive agencies, including the military departments, to comply with applicable requirements of Federal laws, including the CWA. The EO requires each agency to submit to the Office of Management and Budget an annual plan for environmental pollution control with cost estimates for the design, construction, management, operation, and maintenance of Federal facilities.
- d. $\underline{\text{DoD Requirements}}$. DoD has established the DON as the DoD Executive Agent for implementation of the CWA.

2. Point Source Control

a. <u>Definition (40 CFR 122)</u>. A point source is any discernible, confined, and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel, or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff.

b. <u>Discharge Permits</u>

- (1) Titles 40 CFR 122 and 40 CFR 125 require NPDES permits for all point source discharges into waters of the United States. Discharges must comply with all terms and conditions of EPA, state, and locally issued permits.
- (2) For installations with discharge points located in states that have not been authorized to administer all or parts of CWA programs, NPDES permits must be requested from, and issued by, the EPA. If a state has a separate water pollution permit program, Marine Corps installations must, when required, obtain a state permit as well as an EPA permit for point sources regulated under that program.
- (3) For all discharge points located in states that have EPA-approved NPDES programs, permit applications must be filed with, and issued by, the appropriate state agency.
- (4) Any discharge that will continue after its discharge permit expires must be re-permitted prior to the expiration date of the current permit. A new permit application must be forwarded to the permitting agency no later than 180 days (90 days for stormwater discharges resulting from construction

activity) prior to the permit expiration date. In the case of complex permits, such applications should be filed well in advance of the 180 day (or 90 day) requirement. To meet these deadlines, installations must allow sufficient time to collect the required information and prepare the application.

- (5) All permit applications and required reports must be prepared in the format prescribed by the permitting agency.
- (6) Any monitoring records, including all original strip chart recordings for continuous monitoring, instrumentation and calibration, maintenance records, and laboratory test results pursuant to sampling, must be retained for a minimum of 3 years at the installation where monitoring is performed, if not otherwise prescribed.
- (7) The owner of a treatment plant which continually fails to meet its discharge permit limits can be subject to enforcement actions by the permitting agency and to citizen suits filed in a United States court.

c. <u>Industrial Wastewater Treatment and Direct Discharge</u> Requirements

- (1) Marine Corps Owned Industrial Wastewater Treatment Plants (IWTP) and other industrial based activities with direct discharge into receiving waters must obtain and comply with an NFDES permit.
- (2) Direct discharges from oil/water separators must be permitted, monitored, and reported under the NPDES program. The installation of wash water recycling equipment (a pollution prevention technology) is the preferred method of treating and reusing air and ground equipment wash rack effluent. Where the installation of recycling equipment is not practical, wash rack discharges when aircraft or vehicles are being washed should be valved to oil/water separators which discharge to the sanitary sewer and valved to drainage ditches at all other times so that stormwater runoff does not overload the sanitary sewer system. Oil transfer and storage facility storm waters should be directed through an oil/water separator prior to discharge.
- (3) When new NPDES permit standards are promulgated, Marine Corps Owned IWTP's and other industrial activity dischargers may not be able to comply automatically with the new standards. If the discharger determines it cannot meet the new standard, it must begin to upgrade its treatment processes to

meet the deadline for compliance with the new standards. If the discharger cannot meet the required compliance date, it should negotiate a new date in a Consent Order with the appropriate regulatory agency.

d. <u>Discharge to FOTW's</u>

- (1) Industrial discharges to an FOTW will meet all applicable general and categorical pretreatment standards contained in 40 CFR 403 and 40 CFR 405 through 471, respectively, as appropriate. After the effective date of any new pretreatment standards for toxic substances, affected sources will comply within the time frame designated by the appropriate agency.
- (2) If necessary, an FOTW can impose limitations more stringent than the categorical pretreatment standards on industrial activities which discharge to it, in order to prevent interference with treatment plant operations, to prevent pass-through of pollutants to receiving waters, to prevent sewage sludge contamination, to prevent workers from being exposed to health hazards, and to prevent a violation of the FOTW's NPDES permit. The repeated inability of an FOTW to meet its discharge permit limits, due to an industrial activity's failure to pretreat its waste, can result in enforcement actions against both the FOTW and the industrial activity.
- (3) Industrial activities discharging to an FOTW will notify the FOTW operator of any substantial change in quantity or type of pollutants discharged and of any spills, releases, or slug discharges of any substance which could adversely impact the FOTW, its personnel, or the effluent discharged from the treatment works.
- (4) FOTW's discharging to United States waters must be designed, constructed, operated, and maintained to comply with all effluent limitations as prescribed by discharge permits.

e. <u>Discharge to POTW's</u>

- (1) Discharges to a POTW must meet all applicable general and categorical pretreatment standards. After the effective date of any new pretreatment standards for toxic substances, affected sources must comply within the timeframe designated by the permitting authority.
- (2) A POTW controls discharges received from Marine Corps installations or activities through local ordinances, sewer use

contracts, and/or discharge permits. These control mechanisms often require the user to monitor its industrial discharges into the sewer, to pretreat certain categories of wastes, to notify the treatment plant of substantial changes to the quantity or quality of the influent, and to take other administrative or procedural actions as necessary.

- (3) Dischargers to a POTW usually pay user fees commensurate with the waste load contributed. New sources to such systems may also be required to share in the capital costs for increasing the capacity of the POTW's collection, treatment, and disposal facilities.
- (4) Under the CWA, states have established certain areas for which a regional approach to wastewater treatment is necessary. Such areas have developed section 208 management plans that detail collection and treatment works requirements, timetables for accomplishment of the plan, and requirements for individual participants. Since approved plans are binding on Marine Corps installations within the region, it is imperative that close liaison be established with these planning organizations.

f. Hazardous Pollutant D. arges

- (1) In 40 CFR 116, the EPA identifies a list of HS's regulated under the CWA. Title 40 CFR 117 presents the reportable quantities for releases of these HS's. Chapter 9 discusses prevention of HS discharges that may result from accidental spills on land or into waters of the United States.
- (2) A POTW which has an NPDES permit is deemed to have a RCRA permit (Permit by rule, 40 CFR 270.60(c)), and it may accept HW for treatment, provided that certain recording, manifesting, and reporting criteria are met. FOTW's are prohibited from treating a HW by section 3023(b) of the FWPCA.
- (3) POTW's have a "domestic sewage exclusion" (40 CFR 261.4(a)(1)) that allows domestic sewage and other wastes, even HW's, that pass through the POTW to be excluded from the definition of a solid waste and thus are exempt from RCRA regulation. FOTW's have a similar but conditional "domestic sewage exclusion" (FWPCA section 3023(a)(1-4)), which would allow a waste, even if originally hazardous, to pass through the FOTW and escape RCRA regulation if it has first been processed at a separate wastewater treatment unit (40 CFR 260.10(120)) to meet the applicable industrial categorical pretreatment standards of

40 CFR 405-471. The FFCA excluded solid or dissolved wastes which meet one of the following conditions:

- (a) Those subject to a pretreatment standard promulgated in subchapter N (40 CFR 405 through 471) for which the source is in compliance.
- (b) Those covered under a pretreatment standard which the EPA is scheduled to promulgate by 1999.
- (c) Those not prohibited from land disposal because they have been pretreated in accordance with RCRA section $3004\,(\text{m})$.
- (d) Those originating from a location which generates less than 100 kilograms of HW per month.

g. <u>Stormwater Discharges</u>

- (1) The 1987 CWA amendments established greater regulation of stormwater discharges; the implementing regulations in 40 CFR 122.26 became effective in December 1990. Stormwater discharges from a point source are subject to NPDES permitting if the discharges are associated with industrial activity or are specifically identified as contributing to a violation of water quality standards. The regulations require an NPDES permit for such stormwater discharges made directly to receiving waters or to a municipal storm sewer that is separate from the municipal sanitary sewer. The regulations exclude discharges of stormwater to a combined sewer system or to a POTW.
- (2) Applications for an NPDES stormwater permit can be submitted either through the individual permit application process or through a general permit. Installations should coordinate with regional EPA offices and cognizant state regulatory agencies to access the applicability of general or individual permit procedures.
- (a) Operators of facilities with stormwater discharges associated with industrial activity which do not obtain coverage under a general permit or which are not eligible for a general permit must submit an individual permit application. The information required for an individual application includes a site drainage map, a narrative description of the site that identifies potential pollutant sources, and quantitative testing data. Stormwater discharges that cannot be authorized by general permits include those:

1 with existing effluent guideline limitations
for stormwater;

- 2 With an existing NPDES individual or general permit for stormwater discharges; or
- 3 Which are, or may reasonably be expected to be, contributing to a violation of a water quality standard.
- (b) Title 40 CFR 122.26(c) specifies the EPA's individual stormwater permit application procedures and information requirements. Applications must be submitted 180 days before the discharge begins or 90 days before the construction activity is due to begin. State regulations generally parallel those of the EPA in requiring that a permit application be filed with the appropriate permitting authority.
- (c) General permits are intended to cover the majority of stormwater discharges associated with industrial activity. Dischargers seeking to be covered by a general permit must file a Notice of Intent (NOI) with the appropriate permitting authority. The NO! requirements for the general permit usually address only a eral information and typically do not require the collection of and itoring data. Title 40 CFR 122.28 provides information regarding general permit NOI filing requirements. The EPA published its final NPDES stormwater multi-sector general permit for industrial activities in the September 29, 1995, Federal Register.
- (3) Industrial activities and facilities which can contaminate stormwater and to which these regulations apply may occur on Marine Corps installations. These activities and facilities include HW treatment, storage, and disposal facilities; scrap and waste material processing and recycling facilities; landfills; sewage sludge land application sites; petroleum bulk oil stations and terminals; airfields; wastewater treatment plants with a design capacity of one million gallons per day or greater; and construction activities.
- (4) Installations discharging to a separate municipal storm sewer system serving a population of 100,000 or more must submit notification information to the operator of the municipal storm sewer system.
- (5) In general, the EPA and state stormwater discharge permit regulations require the permittee to:

- (a) File a permit application or NOI.
- (b) Determine if any nonstormwater discharges occur. Certain nonstormwater discharges are authorized, such as water from fire fighting activities, hydrant flushing, street cleaning, air-conditioning and compressor condensates, and lawn watering. For other nonstormwaters, the discharger must develop a list of illicit discharges discovered and submit it to the regulatory agency. The agency determines which discharges may be permitted and under what conditions. Any discharges that cannot be permitted must be eliminated. Coordination with Federal and state regulatory agencies is essential to determine applicable requirements.
- (c) Prepare and implement a stormwater pollution prevention plan (SWPPP). The plan's objectives should be to identify pollution sources potentially affecting stormwater discharge quality and to describe and implement practices to minimize and control pollutants from the industrial facility. The process for developing an SWPPP includes the following four steps: 1) formation of a qualified pollution prevention team; 2) assessment of potential stormwater pollution sources; 3) selection and implementation of appropriate BMP's and controls; and 4) periodic examination of the plan's effectiveness. Further information is provided in the EPA publication Stormwater Management for Industrial Activities: Developing Pollution Prevention Plans and Best Management Practices. Chapter 15 of this Manual provides additional information regarding general pollution prevention.
- (d) As required by the permit, monitor the discharges, report the results to the permitting authority, and maintain required records.
- (e) Comply with any effluent limits placed within the permit.
- (6) The EPA's Guidance Manual for the Preparation of NPDES Permit Applications for Stormwater Discharges Associated with Industrial Activity (EPA-505/8-91-002) provides an overview of the permitting process and information regarding the permit application requirements.

h. <u>Waste Disposal Sites</u>

(1) Collected stormwater runoff from waste disposal sites, such as landfills, sewage sludge monofilis, and land application sites, is regulated under an NPDES permit as noted in paragraph 20104.3(f).

- (2) Leachate from waste disposal sites must be tested for the hazardous characteristics listed in 40 CFR 261 to determine which disposal method can be used. Landfill leachates have been found to contain high concentrations of toxic organic compounds, metals, and conventional and nonconventional pollutants.
- (a) Hazardous leachate must be treated or disposed of in accordance with requirements specified for HW (see chapter 10 of this Manual).
- (b) Nonhazardous leachate from waste disposal sites may need to be pretreated prior to discharge to an FOTW or a POTW. Direct discharges of nonhazardous leachate to receiving waters must be permitted under the NPDES. The EPA will propose effluent guidelines and pretreatment for the landfill leachate and incinerator category (40 CFR 437) in 1997. Until those standards are promulgated, the general pretreatment standards (40 CFR 403) apply to leachate discharged to an FOTW or a POTW. The permitting authority will develop treatment and permit requirements for leachate disc med to receiving waters depending upon the quantity and no three of the leachate and its potential impact on the environment.

i. Non-NPDES Discharge Permits

- (1) Sanitary and industrial wastewaters and stormwater may be disposed of in a nondischarging manner. Examples of such instances are evaporation/transpiration ponds, leach fields, spreading basins, and land application systems.
- (2) Such discharges are not regulated under the NPDES program, but are normally regulated under a state permit program, such as California's "Waste Discharge Requirements." These state permits usually contain limitations and conditions similar to those in NPDES permits, such as monitoring, reporting, and recordkeeping requirements, flow restrictions, pollutant limits, etc. Noncompliance with these state permit conditions is subject to enforcement action by the permitting authority.

NPS Control

a. <u>Regulatory Citation</u>. The EPA regulations in 40 CFR 130 specify requirements for NPS management programs. These regulations incorporate CWA section 208 requirements for

development of area-wide waste treatment management plans. They also include CWA section 319 requirements for states to establish NPS pollution management programs through WQM plans.

b. <u>State WOM Plan</u>. The plan must describe the nonregulatory and regulatory programs, activities, and BMP's selected to control NPS pollution where necessary to protect or achieve approved water body uses. The plan must identify BMP's to be employed to reduce specific types of NPS pollution, identify programs to implement the BMP's, develop a schedule with annual milestones for implementing the BMP's, certify that the state has adequate legal authority for administering and enforcing the program, and identify sources of assistance and funding.

c. Contributors to NPS Pollution

- (1) Most NPS pollution results from unchannelled runoff of stormwater, snowmelt, or irrigation. This runoff picks up contaminants from tilled land, urban and suburban areas, construction sites, timber harvest areas, mine drainage, and other disturbed areas.
- (2) Aboard Marine Corps installations, nonpoint sources include agricultural, silvicultural, and grazing operations (including outleases), firing and training range operations, construction sites, industrial activities without discrete point source conveyances, parking lot and roof runoff, and runoff from lawn maintenance activities, such as fertilizer and herbicide applications, in residential and other garrison areas.
- d. <u>Discharge Permits</u>. The EPA and the states do not require discharge permits for nonpoint sources of pollution.

e. BMP's

- (1) Where required by states, installations must implement BMP's to control NPS pollution. If not required, installations should implement BMP's as resources allow.
- (2) BMP's which can be implemented to reduce NPS pollution include, but are not limited to, the following:
- (a) Pollution prevention, such as performing maintenance and storing materials under cover;

- (b) Wet and dry stormwater detention and retention ponds with sedimentation manholes and inverted elbows to trap sediments and floatable items;
 - (c) Constructed wetlands;
 - (d) Grassed swales;
- (e) Forest buffers from 50 to 100 feet wide along streams; and
- (f) Fabric screens and hay bales at construction sites to reduce erosion and trap sediments prior to discharge.

f. <u>Waste Disposal Sites</u>

- (1) To prevent surface water contamination, 40 CFR 258.25 requires that runoff from the active portion of the landfill unit not cause a discharge of pollutants into waters of the United States, including wetlands, which violates any requirements of the CWA, including NPDES requirements.
- (2) Similarly, 40 CFP 18.27(b) prohibits any discharge of a nonpoint source of pollutio, to waters of the United States, including wetlands, which violates any requirement of an area-wide or state-wide WQM plan that has been approved under CWA rection 208 or 319.
- (3) If stormwater runoff and uncontrolled leachate discharges to surface waters occur, they must be controlled by an NPDES permit.
- g. <u>Reference</u>. The EPA Seminar Publication entitled *Nonpoint Source Watershed Workshop* (EPA/625/4-91/027) provides in-depth information for developing and implementing nonpoint source pollution control projects.

4. Septage Treatment and Disposal

a. Requlatory Citations

(1) The EPA regulations define domestic septage as "either liquid or solid material removed from a septic tank, cesspool, portable toilet, type III marine sanitation device, or similar treatment works that receives only domestic sewage." Septage that does not meet this definition must be handled and disposed of per 40 CFR 257.

- (2) Septage which is land applied must meet the requirements in 40 CFR 503.
- b. <u>Septic Tank Management</u>. The EPA regulations for UIC in 40 CFR 146 apply to septic tanks and cesspools which are class V wells by virtue of their drain fields. They contain requirements for construction, operating, monitoring, and reporting.

c. <u>References</u>

- (1) The EPA publication entitled Guide to Septage and Disposal (EPA/625/R-94/002) provides concise, practical information on septic tank management and the handling, treatment, and disposal of septage.
- (2) The EPA Handbook on Septage and Disposal (EPA-625/6-84-009) presents a review of available design, performance, operation and maintenance, cost, and energy information pertaining to receiving, treatment, and disposal of septage.

5. <u>Groundwater Protection</u>

a. <u>General</u>. Another goal of programs which regulate point and nonpoint sources of water pollution is to prevent groundwater contamination from those sources. Specifically, the WQM plans, UIC program, and WHP program ensure that groundwater sources for drinking water are protected from contamination. Chapter 18 of this Manual provides information regarding groundwater protection requirements applicable to underground storage tanks (UST).

b. State WOM Plans

- (1) State WQM plans identify and develop programs to control groundwater pollution resulting from disposal of pollutants on land or in subsurface excavations. States can require installations to monitor groundwater around landfills, leaking UST sites, firing ranges, wastewater oxidation and percolation ponds, septic tank leach fields, fire training pits which use waste fuel, HW storage sites, etc.
- (2) States may issue Non-NPDES-discharge permits with pollutant limits intended to protect underlying aquifers from contaminants contained in the discharge using the state WQM plan as the basis for the permit limitations.

c. <u>UIC Program</u>

- (1) Title 40 CFR 144 148 contains the UIC program regulations. Chapter 16 of this Manual summarizes these regulations and highlights important requirements:
- (2) Installations must pay special attention to class V wells, which include certain septic system wells and desspools, stormwater drainage wells, and dry wells used for waste disposal. To continue to operate these wells under the permit by rule, the installation must submit to the permitting authority an inventory of all wells located on the installation. Improperly managed wells can contaminate groundwater used by the installation for its drinking water supplies.

d. WHP Program

- (1) This locally administered program protects community drinking water wells and well fields from contamination sources. Chapter 16 summarizes these regulations and highlights important requirements.
- (2) An installation which derives its potable water from on-base wells should survey its agricultural, commercial, industrial, residential, and other activities to identify and locate operations with the potential to release pollutants into the underlying groundwater.

e. <u>References</u>

- (1) The EPA Technical Assistance Document, A Review of Sources of Groundwater Contamination from Light Industry (EPA 440/6-90-005), addresses the potential impacts of contamination from light industrial activities on WHP areas. Light industry sectors covered by this document and found at Marine Corps installations include metal products and machinery, scrap material recycling, transportation equipment maintenance, automotive and truck repair, and highway de-icing.
- (2) The EPA document, A Groundwater Information Tracking System with Statistical Analysis Capability (EPA/625/11-91/002), provides software and instructions to implement a comprehensive database system designed to store, analyze, and report data generated during groundwater monitoring programs required by RCRA, CERCLA, and the SDWA.

Sewage Sludge Use or Disposal

a. Requlatory Citations

- (1) The EPA regulations in 40 CFR 268 provide standards for the land disposal of sewage sludge determined to be hazardous under 40 CFR 261.
- (2) The EPA regulations in 40 CFR 258 provide the requirements for disposal of sewage sludge in a municipal solid waste landfill.
- (3) The EPA regulations in 40 CFR 240 provide the requirements under which sewage sludge may be co-fired in an incinerator with other wastes.
- (4) The EPA regulations in 40 CFR 503 provide the standards for the use and disposal of nonhazardous sewage sludge. These standards apply to the following:
- (a) Any installation which prepares sewage sludge, applies sewage sludge to land, or fires it in a sewage sludge incinerator, and to the owner/operator of a surface disposal site;
- (b) Any sewage sludge applied to the land, placed on a surface disposal site, or fired in a sewage sludge incinerator;
- (c) The exit gas from a sewage sludge incinerator stack; and
- (d) The land where sewage sludge is applied, a surface disposal site, and a sewage sludge incinerator.
- (5) The EPA regulations in 40 CFR 257 provide the standards for the disposal of nonhazardous sewage sludge on land when the sewage sludge is not disposed through a practice regulated under 40 CFR 503.

b. Permit Requirements

(1) An FOTW, which is classified under 40 CFR 122.2 as a "treatment works treating domestic sewage," must submit an NPDES permit application to comply with the provisions of 40 CFR 503. The application must be submitted to the appropriate permitting authority (either the EPA, or the state, if it has an EPA-approved sludge management program).

(2) For the operation of a sewage sludge incinerator, a Clean Air Act permit application must be submitted to the appropriate permitting authority.

c. Land Application Requirements

- (1) Land application includes the spraying or spreading of sewage sludge onto the land surface, the injection of sewage sludge below the land surface, or the incorporation of sewage sludge into the soil so that it can condition the soil or fertilize crops or vegetation.
- (2) Marine Corps installations which apply bulk sewage sludge to the land, prepare sewage sludge for application to land off site, sell or give away sewage sludge or a sewage sludge-derived product in a bag or other container, or apply domestic septage to the land must comply with the requirements in 40 CFR 503, subpart B. These requirements include adherence to pollutant ceiling concentrations, cumulative and annual pollutant loading rates, and monthly average pollutant concentrations; management practices; operational standards for pathogens and vector attraction reduction; and monitoring, recordkeeping, and reporting, depending on the quality of the sludge.

d. <u>Surface Disposal</u>

- (1) Surface disposal involves the disposal of sewage sludge in an active sewage sludge unit. It does not include the treatment or storage of sewage sludge on land in preparation for ultimate use or disposal.
- (2) If the same sewage sludge is stored at a site for more than 2 years, the permitting authority can determine that the storage site has become an active sewage sludge unit unless the installation can explain extenuating circumstances for delaying disposal.
- (3) Marine Corps installations which dispose of sewage sludge at an active sewage sludge unit must comply with the requirements in 40 CFR 503, subpart C. These requirements include proper location of an active sewage sludge unit; submission of closure and post closure plans 180 days prior to closure of the unit; sewage sludge pollutant concentrations; management practices; operational standards for pathogens and vector attraction reduction; and monitoring, recordkeeping, and reporting.

- e. <u>Pathogens and Vector Attraction Reduction</u>. The EPA regulations in 40 CFR 503, subpart D, provide the following requirements for pathogen and vector attraction reduction in sewage sludge:
- (1) Class A pathogen control requirements for application of bulk sewage sludge to a lawn or garden or when sewage sludge is sold or given away in a bag or other container.
- (2) Either class A requirements or class B requirements with appropriate site restrictions for application of bulk sewage sludge to agricultural land, forest land, a public contact site, or a reclamation site or for disposal in an active sewage sludge unit.
- (3) Appropriate pH treatment and/or site restrictions when domestic septage is applied to agricultural or forest land or a reclamation site.
- (4) At least one of the appropriate vector attraction reduction requirements in 40 CFR 503.33 for all forms of land application or disposal of sewage sludge or domestic septage.

f. <u>Incineration</u>

- (1) Marine Corps installations which fire sewage sludge in a sewage sludge incinerator must comply with the requirements in 40 CFR 503, subpart E. These requirements include adherence to National Emission Standards for beryllium and mercury in 40 CFR 61, subparts C and E, respectively; pollutant limits for arsenic, cadmium, chromium, lead, and nickel as calculated by the appropriate equations in 40 CFR 503.43; operational standards for total hydrocarbons or carbon monoxide; management practices; and monitoring, recordkeeping, and reporting.
- (2) Compliance with pathogen and vector attraction reduction requirements is not required for facilities which fire sewage sludge in a sewage sludge incinerator.

Dredge and Fill Operations

a. <u>Permits</u>

(1) Installations which intend to construct a dam, dike, dock, pier, or other structure, or to dredge, fill, or otherwise alter or modify navigable waters or wetlands must apply to the COE district engineer or authorized state agency for an

individual permit, unless the discharge is allowed under a nationwide or regional general permit.

- (2) The EPA and COE regulations in 40 CFR 230 and 33 CFR 320, respectively, explain the basis of the dredge and fill permit system:
- (a) 33 CFR 321 explain regulations for a COE permit to construct a dam or dike.
- (b) 33 CFR 322 contains regulations for a COE permit to construct a structure in, or one that will affect, waters of the United States.
- (c) 33 CFR 323 sets forth regulations for a COE permit to discharge dredged or fill material in waters of the United States.
- (d) 33 CFR 325 specifies application requirements for individual COE permits.
- (e) 33 CFR 330 contains regulations regarding general nationwide permits.
- (f) 40 CFR 233 provides procedures on state permit programs regulated by the EPA for discharge of dredged or fill material.
- (3) If the district engineer determines that a water quality certification for the proposed activity is necessary under CWA section 401, the district engineer will inform the installation of this requirement. The installation must obtain a state certificate indicating that the activity complies with applicable state effluent limitations, water quality related effluent limitations and standards, water quality implementation plans, and toxic effluent limitations. If the state includes any monitoring requirements, these must be forwarded to the COE district engineer for consideration with the permit application.
- (4) An installation which is located within a state operating under an approved coastal zone management program must ensure that the proposed activity is consistent with the state CZMA management program. If the proposed activity is not consistent with the state CZMA program, the district engineer cannot make a decision on the permit application until the installation and the state have implemented the procedures specified in the CZMA for resolving their disagreements.

(5) The COE and states with EPA-approved dredging control programs may issue a general permit applicable for 5 years to categories of similar actions that will cause minimal environmental effects either singularly or cumulatively. The general permit may be issued on a state, regional, or national basis. Projects covered by a general permit do not require individual permits, although some additional individual requirements, such as revocation or modification for specific activities due to adverse environmental impact, may be applied by the COE or states on a case-by-case basis.

b. Permit Exemptions

- (1) Normal agricultural, silvicultural, and ranching activities, such as plowing, cultivating, minor drainage, harvesting, and water conservation practices are exempt from regulation under CWA section 404.
- (2) Federal construction projects specifically authorized by Congress for which an Environmental Impact Statement (EIS) has been written and submitted to Congress do not require COE or state permits, as specified in section 404(r) of the CWA.

Discharges of Dredged or Fill Material

- (1) Discharges of dredged or fill material into waters under COE jurisdiction must comply with Federal regulations and the terms of the individual or general permit issued for that activity.
- (2) Discharges into waters under the jurisdiction of states with approved dredging control programs must comply with applicable state permits and discharge regulations, including state fee schedules.
- (3) Disposal site selection may entail field sampling and analyses. An elutriate and bioassay test may be required to determine if the proposed dredged materials should be classified as polluted or unpolluted. Other surveys, including site monitoring, may be required at disposal sites before, during, and after discharge of the dredged or fill material.

8. <u>Ocean Disposal</u>

a. <u>Prohibited Disposal</u>. Ocean disposal of other than dredged material, including any materials collected from Marine

Corps installations or units, is prohibited by the MPRSA unless authorized by an EPA permit.

b. <u>Permits</u>

- (1) No permit may be issued for ocean disposal of biological, chemical, and radiological warfare agents, high level radioactive waste, and medical waste.
- (2) Under section 102 of the MPRSA, the EPA is the authority for issuing all permits for the transportation from the United States, or for the transportation from Outside the Continental United States Marine Corps installations, of any material for the purpose of dumping it in ocean waters at locations where the EPA Administrator determines such dumping will not unreasonably degrade or endanger human health or the marine environment.
- (3) Under section 103 of the MPRSA, the COE is the authority for issuing all permits for the transportation of dredged material that will be disposed of in ocean waters. Installations which intend to transport or contract for the transportation of dredged material for ocean disposal must apply to the COE district engineer for an individual permit. EPA Regional Administrators have the authority to review, to approve or to disapprove, or to propose conditions upon Dredged Material Permits for ocean dumping. The EPA regulations for reviewing these COE permits are specified in 40 CFR 225.
- (4) The EPA and COE regulations in 40 CFR 220 and 33 CFR 324, respectively, explain the basis of the ocean disposal permit systems:
- (a) The 33 CFR 325 specifies application requirements for individual COE ocean disposal permits.
- (b) The 40 CFR 221 contains EPA permit application requirements.
- (c) The 40 CFR 222 sets forth EPA regulations pertaining to approval of ocean dumping permit applications.
- (d) The 40 CFR 227 provides EPA regulations pertaining to evaluation of permit applications for the ocean dumping of material.

- (5) Permit applications must be accompanied by an Environmental Assessment (EA) which includes an examination of the environmental impact criteria set forth in 40 CFR 227, subpart B.
- c. <u>Reporting and Recordkeeping</u>. The EPA regulations in 40 CFR 224 require permittees to maintain appropriate records and to submit periodic reports to the EPA Administrator.

9. CZMA Consistency Determinations

- a. Regulatory Citation. The National Oceanic and Atmospheric Administration regulations in 15 CFR 930 implement the CZMA. Marine Corps actions affecting the coastal zone must be as consistent as possible with approved state management plans, unless such consistency is prohibited based upon requirements of existing laws applicable to the installation and the mission of the Marine Corps. Actions affecting the coastal zone include those that take place outside the coastal zone but affect any land or water use or natural resource within the coastal zone. Chapter 11 of this Manual provides further information regarding the CZMA and its applicable regulations.
- b. <u>Consistency Determination</u>. The consistency determination may employ any format as long as it complies with the requirements contained in 15 CFR 930, subpart C. A consistency determination must be prepared for the following:
- (1) Development projects within the coastal zone (15 CFR 930.33), $\,$
- (2) Nondevelopment projects within the coastal zone which may affect the coastal zone, and
- (3) Installation- or unit-sponsored actions taking place outside the coastal zone but which may impact the coastal zone.

20105. TERMS AND DEFINITIONS

- 1. <u>BMP</u>. Methods, measures, or practices selected by an agency to meet its nonpoint source control needs including, but not limited to, structural and nonstructural controls and operation and maintenance procedures (40 CFR 130).
- 2. <u>Coastal State</u>. A state of the United States in, or bordering on, the Atlantic, Pacific, or Arctic Ocean, the Gulf of Mexico,

Long Island Sound, or one or more of the Great Lakes. This term also includes Puerto Rico, the Virgin Islands, Guam, the Commonwealth of the Northern Mariana Islands, and the Trust Territories of the Pacific Islands, and American Samoa (section 304, CZMA).

- 3. Coastal Waters. In the Great Lakes area, the waters within the jurisdiction of the United States consisting of the Great Lakes, their connecting waters, harbors, roadsteads, and estuary-type areas such as bays, shallows, and marshes; in other areas, those waters, adjacent to the shorelines, which contain a measurable quantity or percentage of sea water, including, but not limited to, sounds, bays, lagoons, bayous, ponds, and estuaries (section 304, CZMA).
- 4. <u>Coastal Zone</u>. The coastal waters (including the lands therein and thereunder) and the adjacent shorelands (including the waters therein and thereunder) that strongly influence each other and that remain close to the shorelines of the several coastal states, as well as islands, transitional and intertidal areas, salt marshes, wetlands, and beaches (section 304, CZMA).
- 5. <u>Designated Uses</u>. Those uses specified in water quality standards for each water body or segment whether or not they are being attained (40 CFR 131). Such uses can include public water supply, contact recreation, noncontact recreation, cold water fishery, warm water fishery, shellfishing, etc.

6. Discharge

- a. Under NPDES, the addition of any pollutant or combination of pollutants to waters of the United States from any point source (40 CFR 122).
- b. Under OPA, any spilling, leaking, pumping, pouring, emitting, emptying, or dumping, excluding NPDES-permitted discharges identified under section 402 of the CWA (40 CFR 110).
- 7. <u>Disposal Site</u>. An interim or ultimately approved and precise geographical area within which the dumping of wastes into the ocean is permitted under specified conditions (40 CFR 228).
- <u>Dredged Material</u>. Material that is excavated or dredged from waters of the United States (33 CFR 323).
- 9. <u>Dumping</u>. A disposal and discharge of material, which does not include any effluent from any outfall structure, that is

- regulated under the provisions of the CWA, under the provisions of section 13 of the Rivers and Harbors Act, or under the provisions of the Atomic Energy Act. Dumping does not mean a routine discharge of effluent incidental to the propulsion of, or operation of motor-driven equipment on, vessels (40 CFR 220).
- 10. <u>Effluent Limitation</u>. Any restriction imposed by the acting director (EPA Regional Administrator or state NPDES-approved program director, as appropriate) on quantities, discharge rates, and concentrations of pollutants which are discharged from point sources into waters of the United States, the waters of the contiguous zone, or the ocean (40 CFR 122).
- 11. <u>FOTW</u>. A facility that is owned and operated by a department, agency, or instrumentality of the Federal Government, which treats wastewater, a majority of which is domestic sewage, prior to discharge in accordance with a permit issued under section 1342 of the FWPCA.
- 12. <u>Fill Material</u>. Any material used for the primary purpose of replacing an aquatic area with dry land or of changing the bottom elevation of a water body (33 CFR 323).
- 13. <u>Indirect Discharger</u>. A nondomestic discharger introducing pollutants to a publicly owned treatment works (40 CFR 122). For the purposes of this Manual, an indirect discharger would include any industrial activity which discharges non sanitary wastewater or waste into a MCOTW.
- 14. <u>IWTP</u>. A wastewater treatment facility that discharges treated industrial effluent directly or indirectly into waters of the United States.
- 15. <u>Load or Loading</u>. An amount of matter (material) or thermal energy that is introduced into a receiving water. Loading can be either man-caused (pollutant loading) or natural (natural background loading) (40 CFR 130).
- 16. Material. Matter of any kind or description, including, but not limited to, dredged material; solid waste; incinerator residue; garbage; sewage; sewage sludge; munitions, radiological, chemical, and biological warfare agents; radioactive materials; chemicals; biological and laboratory waste; wrecked or discarded equipment; rock; sand; excavation debris; and industrial, municipal, agricultural, and other waste (40 CFR 220). This term does not include sewage from vessels as defined in section 312 of the CWA.

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- 17. NPDES. The national program for issuing, modifying, revoking, reissuing, terminating, monitoring, and enforcing permits and for imposing and enforcing pretreatment requirements under sections 307, 402, 318, and 405 of the CWA. The term includes approved state, interstate, or tribal programs (40 CFR 122).
- 18. <u>Nonpoint Source Discharges</u>. Discharges, typically in the form of runoff, that are not conveyed through a single point source. Major operations that result in nonpoint source discharges include agricultural activities, grazing, timber harvesting, construction, range activities, and improper waste disposal practices.
- 19. <u>Ocean Waters</u>. Waters of the open seas lying seaward of the baseline from which the territorial sea is measured, including the waters of the territorial sea, the contiguous zone, and the oceans (40 CFR 220).

20. Permit

- a. Under NPDES, an authorization, license, or equivalent control document issued by the EPA or an approved state to implement the requirements of 40 CFR 122, 123, and 124. Permit includes an NPDES general permit, but does not include any permit which has not yet been the subject of final agency action, such as a draft permit or a proposed permit (40 CFR 122).
- b. Under the CWA section 404 program, a written authorization issued by an approved state to implement the requirements of 40 CFR 233, or by the Marine Corps under 33 CFR parts 320 330, which includes general permits, as well as individual permits (40 CFR 232).
- 21. <u>Point Source</u>. Any discernible, confined, and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, and vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff (40 CFR 122).
- 22. <u>Pollutant</u>. Dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt,

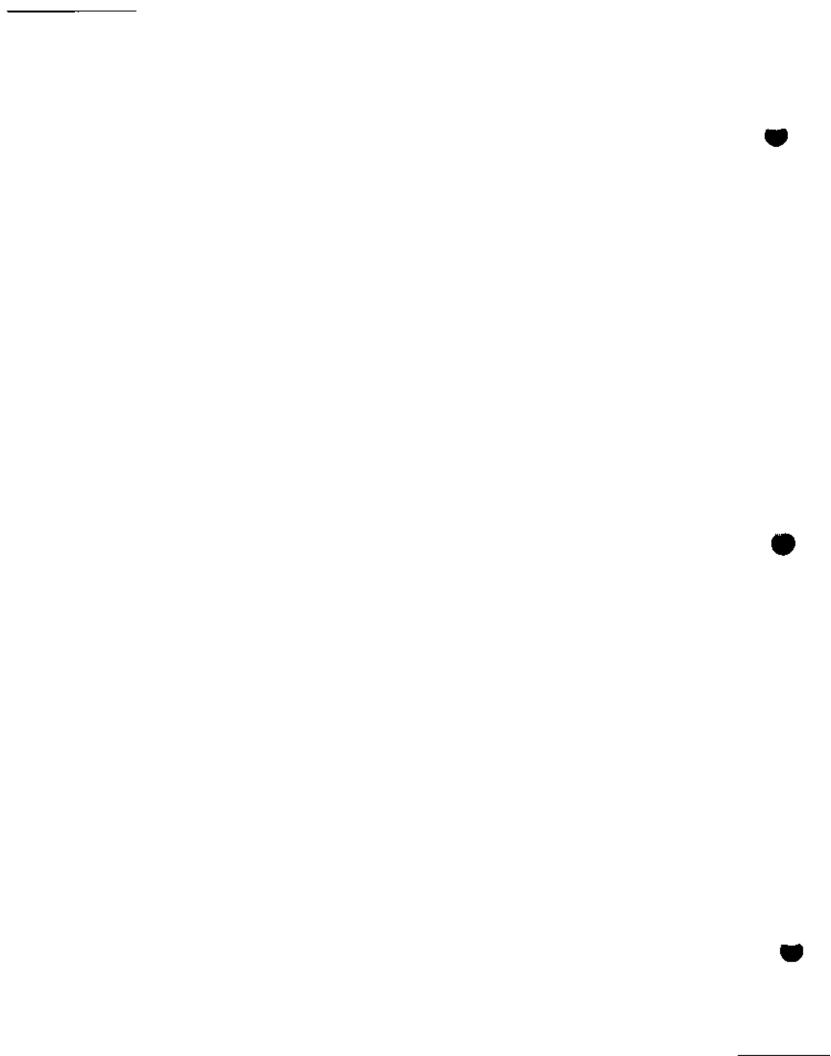
and industrial, municipal, and agricultural waste discharged into water. A pollutant is not 1) "sewage from vessels" as defined in section 312 of the CWA or 2) water, gas, or other material that is injected into a well to facilitate production of oil or gas, or water derived in association with oil or gas production and disposed of in a well. In this case the well used either to facilitate production or for disposal purposes is one approved by authority of the state in which the well is located; however, the state must determine that such injection or disposal will not result in the degradation of ground or surface water resources (40 CFR 122).

- 23. <u>Pretreatment</u>. The reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater prior to or in lieu of discharging or introducing such pollutants into a POTW. The reduction or alteration may be accomplished by physical, chemical, or biological processes, operational process changes, material substitutions, or by other approved means.
- 24. <u>POTW</u>. Any device or system (including recycling and reclamation) used in the treatment of municipal sewerage or industrial wastes of a liquid nature which is owned by a state or municipality. This definition includes sewers, pipes, or other conveyances only if they convey wastewater to a POTW providing treatment (40 CFR 122).
- 25. \underline{Runoff} . Water that drains overland from any part of a facility.
- 26. <u>Sediment</u>. Solid material, such as clay, gravel, mud, silt, sand, and organic matter that moves from its site of origin and settles to the bottom of a water course or water body.
- 27. <u>Septage</u>. The liquid and solid material pumped from a septic tank, desspool, or similar domestic sewage treatment system, or from a holding tank when the system is cleaned or maintained (40 CFR 122).
- 28. <u>Sewage Sludge</u>. Any solid, semisolid, or liquid residue removed during the treatment of municipal wastewater or domestic sewage. It includes, but is not limited to, solids removed during primary, secondary, or advanced wastewater treatment; sound, septage, portable toilet pumpings; type TII marine sanitation device pumpings; and sewage sludge products. Sewage sludge does not include grit or screenings, or ash generated during incineration of sewage sludge (40 CFR 122).

- 29. <u>Sewage Sludge Use or Disposal Practice</u>. The collection, storage, treatment, transportation, processing, monitoring, use, or disposal of sewage sludge (40 CFR 122).
- 30. <u>Territorial Sea</u>. The belt of seas measured from the baseline, in accordance with the Convention on the Territorial Sea and the Contiguous Zone (the line of ordinary low water located along the coast that is in direct contact with the open sea and the line marking the seaward limits of inland waters), and extending seaward at a distance of 3 nautical miles (40 CFR 230).
- 31. <u>Treatment Works Treating Domestic Sewage</u>. A POTW, FOTW, or any other sewage sludge or wastewater treatment device or system, regardless of ownership, used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated for the disposal of sewage sludge (40 CFR 122).
- 32. Toxic Pollutant. Any pollutant listed as toxic under section 307(a)(1) of the CWA or, in the case of sludge use or disposal practices, any pollutant identified in regulations implementing section 405(d) of the CWA (40 CFR 122). Toxic pollutants include those that have been determined by the EPA as causing death, disease, behavioral abnormalities, cancer, genetic mutations, physical deformities, or physiological malfunctions.
- By. <u>Underground Injection</u>. A well injection which consists of the subsurface emplacement of fluids through a bored, drilled, or driven well, or through a dug well, where the depth of the well dug is greater than the largest surface dimension (40 CFR 144).
- 34. <u>Wasteload Allocation</u>. The portion of a receiving water's loading capacity that is allocated to one of its existing or future point sources of pollution (40 CFR 130).
- 35. <u>Water Ouality Standards</u>. Provisions of state or Federal law which consist of a designated use or uses for the waters of the United States, and water quality criteria for such waters based upon such uses (40 CFR 130).
- 36. Waters of the United States. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; all interstate waters including interstate wetlands; all other waters such as intrastate lakes, rivers, perennial and intermittent streams,

mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds. The use, degradation, or destruction of these waters could affect interstate or foreign commerce, including waters used for recreational, industrial, or other purposes (e.g., fishing, harvesting Shellfish, etc.); impoundments of waters otherwise defined herein; tributaries of waters identified above; the territorial seas; and wetlands adjacent to waters identified above (33 CFR 328).

37. Whole Effluent Toxicity. The aggregate toxic effect of an effluent measured directly by a toxicity test (40 CFR 122). Toxicity tests can be conducted to measure "acute" and "chronic" toxic effects.



CHAPTER 20

WATER QUALITY MANAGEMENT

SECTION 2: MARINE CORPS POLICY

20200. GENERAL

- 1. Marine Corps installations in the United States will comply with all substantive and procedural WQM regulations established by the EPA or those states that have been granted primary enforcement responsibility.
- 2. Marine Corps installations within foreign countries will comply with the applicable Final Governing Standards (FGS)/Japan Environmental Governing Standards or the Overseas Environmental Baseline Guidance Document if no FGS has been published.

20201. POINT SOURCE CONTROL

- 1. Marine Corps policy directs the reduction or elimination of wastewater treatment and disposal needs through a pollution prevention program. This program should examine and implement wastewater volume and pollutant reductions through process changes, materials substitution, cooling water recycling, water conservation practices and equipment, wastewater reclamation and reuse, and wastewater collection system maintenance and renovation to decrease groundwater infiltration and stormwater inflow. Ensure that the environmental management hierarchy (EMH) is employed, pollution prevention alternatives evaluated, and life-cycle cost impacts assessed, in evaluating and selecting projects that address compliance requirements. The Pollution Prevention Act establishes the following order of preference for the EMH:
 - a. Source reduction.
 - b. Recycling,
 - c. Treatment, and
 - d. Disposal.
- 2. The use of a regional or municipal POTW will be the preferred method for wastewater collection, treatment, and disposal

whenever an analysis of life-cycle costs and environmental impacts indicates that the use of a POTW is more economical and environmentally beneficial than constructing/upgrading and operating an FOTW. Economic components used in the analysis should include any capital cost contributions to the POTW for a prorated share of system capacity; continuing user fees and surcharges; pretreatment costs; and FOTW capital; operation and maintenance costs, including expenses for permit fees, monitoring, utilities, equipment repair and replacement; solids handling and disposal; chemical usage; and personnel staffing, training, and certification. The environmental analysis should include surface and groundwater quality and quantity issues, threatened and endangered species impacts, and archaeological, cultural, and natural resources issues.

- 3. The installation and operation of Marine Corps owned wastewater treatment and disposal facilities are authorized whenever a municipal system or other alternatives are not available or cost-effective.
- 4. The Marine Corps encourages wastewater reclamation for reuse; this option should be studied during planning for the construction of new wastewater facilities or for renovation, expansion, or the upgrading of existing facilities. Reuse options pertain to industrial wastewater recycling, aquifer recharge, constructed wetlands, wildlife habitat mitigation or enhancement; and to the irrigation of parade decks, athletic fields, golf courses, forests and tree lines, and garrison and residential landscaping; and to outleased areas used for agriculture, silviculture, or grazing.
- 5. Job descriptions for Marine Corps wastewater treatment plant and collection system operators must require a state certification, or license, or the ability to obtain and maintain a certification or license as a condition of employment at all facilities where state certification requirements apply, as stipulated in the Federal Personnel Manual (Supplement 271-1, subchapters 3-4, "License and Credentials").
- 6. The CMC (LF) supports funding for annual refresher training for all plant and collection system operators, especially for safety-related courses. Training sources include the EPA, state environmental and health departments, local colleges and universities, extension courses, and private firms.
- Marine Corps laboratories which perform wastewater and stormwater analyses as required in permit monitoring conditions

must be certified under applicable regulations of the Federal, state, or local permitting authority, if required. Appropriate chain of custody procedures will be used to track samples collected for analysis. The 40 CFR 136 contains EPA tost procedures for analyzing water pollutants.

20202. NONPOINT SOURCE CONTROL

- 1. Marine Corps installations must implement BMP's to control nonpoint source pollution.
- 2. Stormwater from military construction projects that increase impervious surfaces must be managed in accordance with state regulations and engineering practices that manage the quantity and quality of stormwater runoff.
- 3. Lease terms for agricultural, silvicultural, and grazing operations will include requirements for implementing BMP's for pesticide, fertilizer, and erosion controls to reduce contaminated runoff.

20203. SEPTAGE TREATMENT AND DISPOSAL

- 1. Marine Corps installations with septic tanks will ensure that these tanks do not contaminate adjacent surface waters or groundwaters.
- 2. A periodic inspection program must be developed to determine when pumping is required and if any structural defects, such as broken baffles or cracked pipes, exist. The recommended frequency is every 4 to 5 years.
- 3. Marine Corps installations may select their own preferred method of septage disposal. If land disposal is selected, the installation or its contractor must adhere to the requirements in 40 CFR 503.

20204. GROUNDWATER PROTECTION

1. Underground injection of wastes will be used only as a last resort at Marine Corps installations after all other disposal alternatives have been considered and rejected as unfeasible. Any underground injection well, including those within class V,

will be operated in compliance with the UIC program and applicable permits.

2. Marine Corps installations will inventory all class V wells to determine whether pollutants are discharged into underlying aquifers. Class V wells include certain septic system wells and cesspools, stormwater drainage wells, and dry wells used for waste disposal, such as those found in motor pools.

20205. SEWAGE SLUDGE USE AND DISPOSAL

- 1. The preferred method of sewage sludge disposal is the beneficial use at land application sites, as regulated under 40 CFR 503. This method requires the effective pretreatment of industrial wastes, including proper management of oil/water separators, to prevent contamination of sewage sludge. An effective monitoring program is also necessary to ensure compliance with subpart B requirements.
- 2. If sewage sludge is transported off site for disposal, the installation will ensure that the disposal agent acts in accordance with applicable regulations and permits.

20206. DREDGE AND FILL OPERATIONS

- 1. Marine Corps installations proposing to undertake any action requiring a COE permit must apply to the COE District Engineer for the district in which the proposed activity is to be conducted. The installation may request assistance from the cognizant Naval Facilities Engineering Command Engineering Field Division/Activity (EFD/EFA) in preparing and submitting the permit application. Applications for COE permits are normally initiated by the EFD/EFA at the 35 percent design stage. Whenever a potential requirement for a COE permit under this section is identified, initiate consultation with the CMC (LF).
- 2. A National Environmental Policy Act (NEPA) analysis must be conducted for any actions that will require an individual permit for dredge and fill activities or the loss of wetlands. Because this process is complex and lengthy, it must be initiated well in advance of developing and filing the permit applications. Further information on the NEPA process is provided in chapter 12 of this Manual.

- 3. COE permits are required by Marine Corps installations for the following actions:
 - a. The construction of a dam or dike (33 CFR 321);
- b. The construction of a structure in, or one that will affect, waters of the United States (33 CFR 322);
- c. Dredging projects for navigation to enhance morale, welfare, and recreational activities (33 CFR 322);
- d. The discharge of dredged or fill material into the navigable waters of the United States, including wetlands (33 CFR 323); and
- e. The transportation of dredged material for dumping in ocean waters (33 CFR 323).
- 4. Existing disposal sites, approved by the COE, should be used wherever possible. Proposed new disposal sites should be identified and reported to the cognizant COE district engineer for evaluation and approval 2 to 3 years before project initiation.
- 5. If a land disposal site is proposed, consideration must be given to the liquid runoff and leaching potential of undesirable chemical constituents and to any NPDES-permit requirements. Requests for revalidation of existing permits for maintenance dredging and disposal must be received by the COE at least 6 months prior to expiration of the permit.
- 6. A permit for maintenance dredging will include an expiration date that will not extend more than 10 years from the issue date. A request for renewal from the COE must be filed with the cognizant District Engineer at least 1 year before expiration.
- 7. The COE or the supporting EFD/EFA may be requested, on a cost-reimbursable basis, to prepare or assist in the preparation of an EA/EIS for projects requiring a COE permit.
- 8. Early planning for dredge spoil disposal site selection, preparation, and use is essential to avoid unnecessary costs and delays.

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20207. OCEAN DUMPING. Except in emergency situations (e.g., jet fuel dumped from aircraft in an emergency situation to safeguard life), ocean dumping may be authorized only on a case-by-case basis by the EPA. Requests for such authorization must be accompanied by an EA (see chapter 12). Full compliance with EPA regulations (40 CFR 220-229) is required.

20208. <u>COASTAL ZONE MANAGEMENT ACT (CZMA) CONSISTENCY</u>
<u>DETERMINATIONS</u>. Marine Corps installations must review proposed actions to identify those that directly affect the coastal zone. For all activities affecting the coastal zone, provide a consistency determination to the appropriate state agency at least 90 days prior to final approval for the activity.

ENVIRONMENTAL COMPLIANCE AND PROTECTION MANUAL

CHAPTER 20

WATER QUALITY MANAGEMENT

SECTION 3: RESPONSIBILITIES

20300. <u>CMC (LF)</u>

- 1. Provide information and advice to installation commanders and tenants regarding proposed and final rules and regulations pertaining to WQM and uniformly apply Marine Corps policy as set forth in the Manual.
- 2. Assist installations in resolving disputes with Federal, state, local, and foreign regulatory agencies as required.
- 3. Conduct special environmental compliance and protection studies with regard to water quality management to assist in establishing policy or initiating actions.
- 4. Ensure, through field visits and the Environmental Compliance Evaluation Program, Marine Corps cooperation and compliance with Federal, state, and local regulatory agencies with regard to water quality regulations.
- 5. Track Marine Corps progress toward meeting established water quality goals.

20301. <u>CG/CO OF MARINE CORPS INSTALLATIONS AND COMMANDER MARINE</u> <u>FORCES RESERVE (COMMARFORRES)</u>

1. Identify and submit to the CMC (LFL) and the CMC (LFF) project documentation and funding requests for water quality management facilities that are required to maintain compliance with applicable existing and emerging regulations and permits. Program and budget for personnel, equipment, materials, training, and monitoring required to comply with water quality management requirements. Pay appropriate Federal, state, and local fees. Ensure that the EMH is employed, pollution prevention alternatives evaluated, and life-cycle cost impacts assessed, in evaluating and selecting projects that address compliance requirements.

- 2. Ensure that all required Federal, state, and local permits are applied for and obtained. Sign certifications and permit applications, as required, for construction of all water quality management projects.
- Ensure that a base or station order is written to implement the specifications of this chapter. This requirement can be accomplished either by writing a comprehensive base order to implement all of this Manual, or by writing a separate base order to implement the contents of this chapter alone.
- Identify and submit to the CMC (LFL) and (LFF) project documentation and funding requests for wastewater sources, collection systems, and treatment facilities that are required to maintain compliance with applicable existing and emerging regulations and permits. Program and budget for personnel, equipment, materials, training, and monitoring required to comply with wastewater treatment requirements.
- 5. Ensure that all required Federal, state, and local permits are applied for and obtained. Sign certifications and permit applications, as required, for construction of all wastewater treatment projects.
- Identify applicable effluent limitations, new toxic pollutant effluent standards, pretreatment standards, wastewater discharge problems associated with solid waste disposal sites, and nonpoint source requirements pursuant to regional plans under section 208 of the CWA.
- Coordinate the review of all projects for the construction of new or upgraded treatment works with the appropriate EPA, state, and regional offices to ensure early identification of discharge permit conditions and limits, siting restrictions, innovative treatment alternatives, wastewater reclamation criteria, and sewage sludge use or disposal options.
- 8. Use innovative treatment technology where technically and economically feasible in the designs for the construction of new or the upgrading of existing wastewater treatment plants.
- Ensure that management programs and controls exist to comply with applicable regulations, permit limits, monitoring, recordkeeping, and reporting requirements for wastewater and stormwater discharges from point and nonpoint sources.

- 10. Identify training and certification needs for operators of treatment and collection system facilities, and allocate needed resources.
- 11. Use municipal or regional wastewater collection and disposal systems to the maximum extent feasible.
- 12. Maintain a liaison with the COE and state or area-wide planning organizations to ensure that Marine Corps interests are considered during regional wastewater treatment planning or co facilitate dredge/fill projects.
- 13. If responsible for operation of a FOTW:
- a. Notify the cognizant permitting agency of any changes in wastewater input to the treatment plant that may affect the ability of the plant to comply with applicable requirements.
- b. Operate and maintain the collection system, treatment works, and effluent discharge facilities to ensure compliance with applicable permit requirements.
- 14. Provide the resources for monitoring, sampling, and testing, as well as for maintaining and demonstrating compliance with permit and pretreatment requirements; maintain records of all monitoring information.
- 15. Identify pollution prevention measures, devices, systems, and procedures to reduce the total generation of wastewater volume and pollutants.
- 16. Ensure that adequate access to wastewater generating and treatment facilities is provided to the EPA, state, and local pollution control authorities for the purpose of waste stream sampling and the inspection of operations and records.
- 17. Ensure that coordination occurs as appropriate with the Safety Office in matters relating to wastewater discharges, sewage sludge use or disposal, dredge and fill operations and, POL management.

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- 20302. <u>COMMANDERS RESPONSIBLE FOR DISCHARGES TO MEDERALLY OWNED TREATMENT WORKS (FOTW) AND PUBLICLY OWNED TREATMENT WORKS (POTW)</u>
- 1. Comply with all applicable pretreatment requirements. This includes providing the necessary resources for moditoring, sampling, recordkeeping, and reporting.
- Implement procedures to notify operators of a meatment works receiving Marine Corps discharges of any changes in discharges or of accidental pollutant discharges.